

A review of the coelotine genus *Eurocoelotes* (Araneae: Amaurobiidae)

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Abstract. The genus *Eurocoelotes*, established in 2002 with fourteen species from Europe, including two new species, *E. halanensis* sp. nov. (♀ only) from Mali Halan, Croatia and *E. paramicrolepidus* sp. nov. (♂ only) from Peloponnisos, Greece, is reviewed. Each species is described with a focus on the male palp and the female epigynum. A key to species is provided. Except for *E. deltshevi* (Dimitrov 1996) and *E. drenskii* (Deltshev 1990), specimens of which were not available, we have provided illustrations for the male palp and the female epigynum of all species. In general, the male *Eurocoelotes* has a short cymbial furrow, a broad conductor dorsal apophysis, a spoon-shaped median apophysis, and a prolaterally originating embolus, but lacks a patellar apophysis. The female *Eurocoelotes* usually has laterally arising epigynal teeth, a large, anteriorly situated atrium, large copulatory ducts, and short, slightly longitudinally extending spermathecae. Exceptions include: *E. falciger* (Kulczyński 1897), which has a long cymbial furrow and a proximally originating embolus, *E. anoplus* (Kulczyński 1897) and *E. gasperinii* (Simon 1891), which have proximally originating emboli, *E. brevispinus* (Deltshev & Dimitrov 1996), which has a distinct patellar apophysis, *E. microlepidus* (de Blauwe 1973) and *E. paramicrolepidus*, which have a tiny patellar apophysis, and *E. xinpingswangi* Deltshev 2009, which has no epigynal teeth.

Keywords: Spider, Europe, new species

Europe is home to at least four genera of the spider subfamily Coelotinae F.O. Pickard-Cambridge 1898: *Coelotes* Blackwall 1841, *Eurocoelotes* Wang 2002, *Pireneitega* Kishida 1955 and *Urocoras* Ovtchinnikov 1999. Twelve species are currently included in *Eurocoelotes* (Platnick 2009; Wang 2009). The type species *Eurocoelotes inermis* (L. Koch 1855) was first described as a member of *Amaurobius*. Later, L. Koch (1868) transferred it to *Coelotes*, where it remained until transferred, although it was also occasionally referred to as *Amaurobius* (Miller 1971). *E. inermis* is the most widely distributed *Eurocoelotes*. Researchers have examined specimens from France, Switzerland, Poland, Germany, Austria, former Yugoslavia, and Bulgaria, while other species have been restricted to limited areas of southeastern Europe from Italy, former Yugoslavia to Bulgaria. Major studies of *Eurocoelotes* have been carried out by Simon (1891, in Gasperini 1891), Kulczyński (1897, in Chyzer & Kulczyński 1897 1906), Drensky (1915, 1942), de Blauwe (1973), Deltshev (1990, 2009), Dimitrov & Deltshev (1996), Dimitrov (1996) and Wang (2002). Simon (1891, in Gasperini 1891) described a unique species from Croatia, *E. gasperinii* (Simon, 1891), that has distinct, short macrosetae distally on the femur (Fig. 22). In addition to a redescription of *E. inermis*, Kulczyński (1897, in Chyzer & Kulczyński 1897, 1906) described three more species, *E. anoplus* (Kulczyński 1897), *E. falciger* (Kulczyński 1897), and *E. karlinskii* (Kulczyński 1906). de Blauwe (1973) treated six *Eurocoelotes* species, including a new species, from the Mediterranean region, [i.e., *E. anoplus*, *E. gasperinii*, *E. inermis*, *E. karlinskii*, and *E. microlepidus* (de Blauwe 1973)]. Another species, *Coelotes longimanus* de Blauwe 1973, was shown to be a junior synonym of *E. anoplus* by Brignoli (1977b). Drensky (1915, 1942) and Deltshev (1990) worked on seven species from Bulgaria, [i.e., *E. drenskii* Deltshev 1990, *E. falciger*, *E. inermis*, *E. jvinitzchi* (Drensky 1915), *E. karlinskii*, *E. kulczynskii* (Drensky 1915), and *E. microlepidus*.] Detailed vulva structures were not described until Deltshev (1990)

illustrated the vulva of some species. Deltshev (1990) also collected and described both sexes of four species from Bulgaria. More work was done in recent years with the description of three new species: *E. brevispinus* (Deltshev & Dimitrov 1996), *E. deltshevi* (Dimitrov 1996), and *E. xinpingswangi* Deltshev 2009.

In this study, all of the species are revised, with a particular focus on the description of their genitalic structures. Two new species, *E. halanensis* sp. nov. from Croatia and *E. paramicrolepidus* sp. nov. from Greece, are described. We have provided illustrations of the male palp and female epigynum for all the described species, except *E. deltshevi* and *E. drenskii*, because specimens are not available. Descriptions focus on genitalia. The phylogenetic relationships of *Eurocoelotes* species were not analyzed, but will be done in the near future in an analysis that will include all coelotine species.

METHODS

Measurements are in mm. Scale lines are 0.2 mm long. Eye diameters are taken at the widest point. The total body length does not include the length of the chelicerae or spinnerets. The species descriptions focus only on the male palp and female epigynum. Elevations are in m above msl. Due to the limitation of available specimens from this region, this study is based mainly on the examination of type specimens, which were loaned from the following museums: AMNH—American Museum of Natural History, New York, USA (N.I. Platnick); AMNH-CU—Cornell University Collection loaned to the AMNH (N.I. Platnick); CAS—California Academy of Sciences, San Francisco, USA (C.E. Griswold); COLL. DELTSHEV—Collection of C.D. Deltshev (C.D. Deltshev); COLL. UBICK—Collection of D. Ubick (D. Ubick); HEC—Hope Entomological Collections, Oxford, UK (M. Akinson); IZS—Institute of Zoology, Sofia, Bulgaria (C.D. Deltshev); MCB—Museo de Bergamo, Bergamo, Italy (P. Pantini); MCV—Musée Civique d’Histoire Naturelle de Verone, Verona, Italy (R.

Salmaso); MCZ—Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA (L. Leibensperger); MNHN—Musée National d'Histoire Naturelle, Paris, France (C. Rollard); NHMB—Naturhistorisches Museum Basel, Basel, Switzerland (A. Hänggi); SMF—Senckenberg Museum, Frankfurt, Germany (M. Grasshoff, J. Martens, P. Jäger); SMNH—Swedish Museum of Natural History, Stockholm, Sweden (T. Kronestedt); USNM—National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA (J. Coddington); ZMB—Museum für Naturkunde, Zentralinstitut der Humboldt-Universität zu Berlin, Berlin, Germany (J. Dunlop and Sh. Nawai).

Abbreviations used in the text are: *Eyes*: AME—anterior median eyes; ALE—anterior lateral eyes; PLE—posterior lateral eyes; PME—posterior median eyes. *Epigynum*: A—atrium; CD—copulatory duct; EH—epigynal hood; ET—epigynal tooth; FD—fertilization duct; S—spermathecae; SB—spermathecal base; SS—spermathecal stalk; SH—spermathecal head. *Palp*: C—conductor; CDA—conductor dorsal apophysis; CL—conductor basal lamella; CF—cymbial furrow; E—embolus; EB—embolic base; LTA—Lateral tibial apophysis; MA—median apophysis; PA—patellar apophysis; RTA—retrolateral tibial apophysis; ST—subtegulum; T—tegulum; TS—tegular sclerite. Elevations are in m above msl.

SYSTEMATICS

Family Amaurobiidae Thorell 1870

Subfamily Coelotinae F.O. Pickard-Cambridge 1898

Genus *Eurocoelotes* Wang

Eurocoelotes Wang 2002:73.

Type species.—Type species *Amaurobius inermis* L. Koch 1855.

Diagnosis.—The genus *Eurocoelotes* resembles *Coelotes* in having a conductor dorsal apophysis, round spoon-shaped median apophysis, laterally arising epigynal teeth, and slightly longitudinally elongated spermathecae. Both genera have three promarginal and three retromarginal cheliceral teeth. But they differ as follows: 1) *Coelotes* has a large, broad patellar apophysis, which is as long as, or at least half of the patellar length. The patellar apophysis of *Eurocoelotes* is usually absent, but may be small, much less than half of the patellar length (e.g., *E. brevispinus* and *E. drenskii*) (Fig. 10) or tiny (*E. microlepidus* and *E. paramicrolepidus* sp. nov.) (Figs. 52, 55); 2) *Eurocoelotes* has a large, anteriorly situated atrium and large copulatory ducts (Figs. 25, 26), while *Coelotes* has a reduced, slit-shaped atrium and small copulatory ducts. *Eurocoelotes* also resembles *Coelotes* in having similar eyes and RTA. ALE largest, PME and PLE subequal in size, slightly smaller than ALE, AME slightly smaller than posterior eyes, but *E. inermis*, *E. jurinitschii*, *E. karlinskii* and *E. kulczynskii* with much smaller AME (Fig. 58). Similar to *Coelotes*, RTA in *Eurocoelotes* extends more than half of the tibial length (Figs. 5, 28).

Description.—See descriptions of type species by L. Koch (1855), Kulczyński (1906), Drensky (1942), de Blauwe (1973), Deltshv (1990), and Wang (2002).

Relationships.—Remain unresolved with *Coelotes* and two other lineages (Wang 2002).

Distribution.—Europe (Fig. 59).

Composition.—Fourteen species, including two new species described in this study.

KEY TO SPECIES OF THE GENUS *EUROCOELOTES*

1. Male	2
Female	14
2. Patellar apophysis present (Figs. 10, 52, 55)	3
Patellar apophysis absent (Fig. 5)	6
3. Patellar apophysis relatively large, distinctly extending beyond distal patella (Figs. 9, 10)	<i>brevispinus</i>
Patellar apophysis relatively small, not extending beyond distal patella (Figs. 52, 55)	4
4. Conductor broad distally, abruptly curved	<i>drenskii</i>
Conductor slender distally, smoothly curved (Figs. 50–55)	5
5. RTA strongly extending distally; conductor slightly coiled distally; median apophysis broad, with retrolateral margin longer than prolateral margin; embolic base smooth, not notched (Figs. 50–52)	<i>microlepidus</i>
RTA slightly extending distally; conductor distinctly coiled distally, shaped like a semi-circle; median apophysis small, with subequal retrolateral and prolateral margins; embolic base with slightly notched retrolateral margin (Figs. 53–55)	<i>paramicrolepidus</i>
6. Embolus prolateral in origin (Figs. 27, 36, 40, 46)	7
Embolus proximal or retrolateral in origin (Figs. 4, 14, 18)	12
7. Median apophysis large, with length of retrolateral margin more than twice the prolateral margin (Figs. 27, 36, 40)	8
Median apophysis small, with length of retrolateral margin less than twice the prolateral margin (Fig. 46)	10
8. Conductor with subdistal, prolaterally directed tooth (Figs. 27, 29)	<i>inermis</i>
Conductor without subdistal tooth (Figs. 36, 41)	9
9. Lateral tibial apophysis broad, wider than long; conductor slightly notched distally (Figs. 35–37)	<i>jurinitschii</i>
Lateral tibial apophysis small, subequal in width and length; conductor not notched distally (Figs. 40–42)	<i>karlinskii</i>
10. Conductor slender	<i>xinpingwangi</i>
Conductor broad (Fig. 46)	11
11. Lateral tibial apophysis small, not bifurcate (Fig. 47)	<i>kulczynskii</i>
Lateral tibial apophysis broad, slightly bifurcate	<i>deltshvii</i>
12. Palpal femur with several short, distal macrosetae and one long, strong median spine on dorsal side (Fig. 22)	<i>gasperinii</i>
Palpal femur without macrosetae	13

13. Embolus retrolateral in origin, extremely long, extending posteriorly to proximal tibia, anteriorly coiling beyond distal bulb; conductor long (Figs. 13–15) *falciger*
 Embolus proximal in origin, moderately long, extending posteriorly to distal tibia, anteriorly not coiling beyond distal bulb; conductor short (Figs. 3–5) *anoplus*
14. Epigynal teeth absent (Fig. 56) *xinpingwangi*
 Epigynal teeth present (Figs. 1, 6, 11) 15
15. Epigynal teeth arising between the atrium and epigastric furrow (Figs. 1, 11, 23, 25) 16
 Epigynal teeth arising from lateral atrium, or slightly posterior atrium (Figs. 6, 16, 33, 38, 43, 48) 19
16. Atria distinctly separated; copulatory ducts distinctly separated (Figs. 23, 24) *halanensis*
 Atrium with single opening; copulatory ducts connected with each other (Figs. 1, 11, 25) 17
17. Copulatory ducts extending laterally, then converging medially (Fig. 12) *falciger*
 Copulatory ducts extending medially between spermathecae (Figs. 2, 26) 18
18. Spermathecae anteriorly converging, close together (Fig. 2) *anoplus*
 Spermathecae anteriorly diverging, widely separated (Figs. 26, 32) *inermis*
19. Copulatory ducts originating anteriorly, extending laterally, converging medially, connecting to spermathecae laterally (Fig. 44) *kulczyński*
 Copulatory ducts originating anteriorly or medially, extending and connecting to spermathecae anteriorly or medially (Figs. 7, 17, 34, 39, 49) 20
20. Copulatory ducts originating anteriorly, extending posteriorly, connecting to the spermathecae anteriorly (Figs. 7, 34) 21
 Copulatory ducts originating medially, extending and connecting to the spermathecae medially (Figs. 17, 39, 49) 23
21. Epigynal teeth shorter than the atrial length (Fig. 6) *brevispinus*
 Epigynal teeth subequal or longer than the atrial length (Fig. 33) 22
22. Epigynal teeth longer than the atrial length, extending posteriorly close to the epigastric furrow (Fig. 33) *jurinitzschii*
 Epigynal teeth subequal to the atrial length, extending posteriorly and separated from the epigastric furrow by about their length *delshevi*
23. Spermathecae separated by at least three times their width (Fig. 49) *microlepidus*
 Spermathecae separated by about their width (Figs. 17, 39) 24
24. Atrium subequal in length and width; epigynal teeth shorter than the atrial length; spermathecae anteriorly diverging (Figs. 16, 17) *gasperinii*
 Atrium wider than long; epigynal teeth about the atrial width; spermathecae slightly anteriorly converging (Figs. 38, 39) *karlinski*

EUROCOELOTES SPECIES DESCRIPTIONS

Eurocoelotes anoplus (Kulczyński 1897)
 (Figs. 1–5, 58)

Coelotes anoplus Kulczyński 1897 (in Chyzer & Kulczyński 1897):162, fig. 17 (female lectotype from Croatia, in MNHN, examined).

Amaurobius anoplus: Kulczyński 1906:468, figs. 5, 42.

Coelotes anoplus: Kolosvary 1938:63; Wiehle 1964:650, figs. 32a, 34–37 only.

Coelotes longimanus de Blauwe 1973:54, figs. 46–48 (male holotype from Castelnuovo, Istria, Croatia, in MNHN, examined). (First synonymized by Brignoli 1977b:26).

Coelotes anoplus: Blauwe 1973:25, fig. 23; Brignoli 1977b:26; Polenec 1985:102, fig. 3.

Eurocoelotes anoplus: Wang 2002:75.

Material examined.—*Lectotype*: CROATIA: 1♀ (MNHN, 15271).

Other material examined: SLOVENIA: 1♀2♂ (H. Wiehle, SMF, 20632/1; 20633/2). CROATIA: Karlobag, P. so fra Karlobag e Gospić, 900 m, August 10, 1970, 3 females (B. Valle, MCB); Istria, N. slope Mt. Učka, 1100 m, June 23, 1962, 5♀ (H. L. Levi, MCZ); Istria, Castelnuovo, ♂ holotype of *Coelotes longimanus* (E. Simon, MNHN, B 2011, 4.641). ITALY: Friuli-Venezia Giulia, Duino Aurisina, Collina di S. Pelagio, 140 m, September 14, 1963, 1♂ (Bianchi Valle, MCB); Friuli-Venezia Giulia, Prepotto, Santuario di Castelmonte, September 13, 1963, 1♀ (B. Valle, MCB); Veneto, Virrorio Veneto, Sella di Fadalto, September 4, 1964, 1♂ (B. Valle,

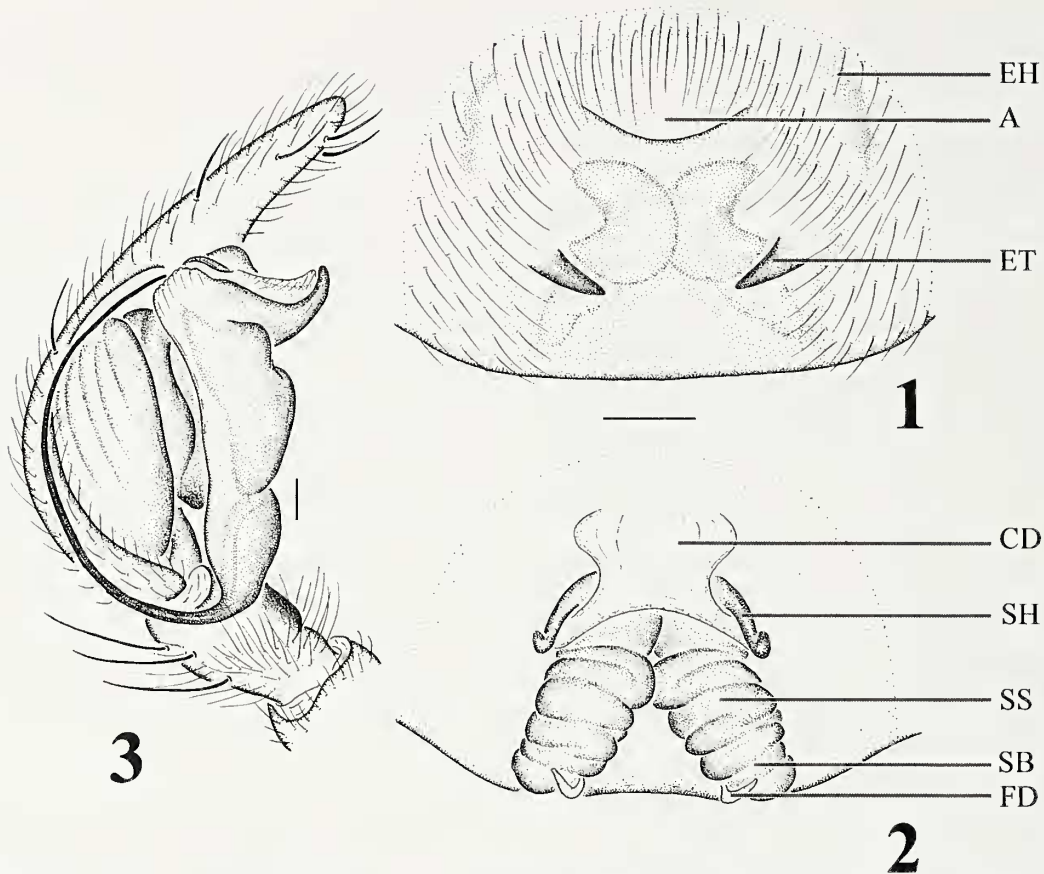
MCB); Polcenigo, Pordenone, December 29, 1969, 1♀ (Zanetti, MCV).

Diagnosis.—The male of this species resembles *E. gasperinii* in having a similar conductor, proximally originating embolus, and broad median apophysis, but can be distinguished by the absence of numerous short macrosetae dorsodistally on the palpal femur. The female can be easily recognized by the epigynal teeth that arise between the atrium and epigastric furrow, the short, anteriorly originating copulatory ducts, and the spermathecae that are posteriorly widely separated, anteriorly converging and contiguous (Figs. 1–5).

Description.—See Kulczyński (1897 in Chyzer & Kulczyński), Kulczyński (1906), de Blauwe (1973).

Female: Epigynal teeth short, arising posteriorly between atrium and epigastric furrow, separated by approximately atrial width; atrium anteriorly originated, anterior and lateral margins indistinct, separated from epigastric furrow by 2–3 times its length; copulatory ducts small, anteriorly originating, slightly extending posteriorly; spermathecae broad, posteriorly widely separated by about their width, anteriorly extending and converging, contiguous; spermathecal heads long, slightly extending posteriorly and laterally (Figs. 1, 2).

Male: Patellar apophysis absent; RTA distinctly extended distally; lateral tibial apophysis broad; cymbial furrow slightly less than half of cymbial length; conductor short, with slightly curved apex, with broad dorsal apophysis, small basal lamella; median apophysis broad, spoon-shaped, retrolateral margin extending more than twice the length of prolateral margin; embolus long, filiform, proximal in origin, extending posteri-



Figures 1-3.—*Eurocoelotes anoplus* (Kulczyński). 1, 2. Female epigynum, ventral and dorsal view. 3. Male palp, prolateral view.

only beyond tarsus/tibia junction to distal part of tibia, anteriorly not coiled beyond distal part of bulb (Figs. 3-5).

Distribution.—Former Yugoslavia, Italy, Austria.

Eurocoelotes brevispinus (Deltshev & Dimitrov 1996)
(Figs. 6-10, 58)

Coelotes brevispinus Deltshev & Dimitrov 1996:77, figs. 1-4 (1 male and 1 female paratypes from Hambar dere, Slavyanka, Bulgaria, in IZS, examined).

Eurocoelotes brevispinus: Wang 2002:76.

Material examined.—*Paratypes*: BULGARIA: Slavyanka, Hambar dere, 1200 m, May 15, 1993, 1♂1♀ (Coll. Deltshev).

Diagnosis.—This species resembles *E. deltshevi* in having large, anteriorly situated copulatory ducts, broad lateral tibial apophysis, a similar conductor, and small median apophysis, but can be distinguished by the small atrium (length and width subequal), short epigynal teeth (shorter than atrial length) in female and the presence of a patellar apophysis in male (Figs. 6-10).

Description.—See Deltshev & Dimitrov (1996).

Female: Epigynal teeth short, arising from lateral atrium, widely separated by more than atrial width; atrium anteriorly situated, small, length and width subequal, separated from epigastric furrow by 1.5 to 2 times its length, with distinct lateral margins but indistinct anterior margin; copulatory ducts originating anteriorly, extending and diverging posteriorly into two distinct tubes; spermathecae broad, round, distinctly separated by about half of their width; spermathecal

heads long, slender, medially originating, extending laterally (Figs. 6, 7).

Male: Patellar apophysis present, sharply pointed distally; RTA distinctly extended distally; lateral tibial apophysis broad; cymbial furrow about 1/3 of cymbial length; conductor short, broad, apex slightly curved, with a broad dorsal apophysis, a small basal lamella; median apophysis small, round, spoon-shaped, retrolateral margin approximately the same size as the prolateral margin; embolus short, filiform, prolateral in origin (Figs. 8-10).

Distribution.—Bulgaria.

Eurocoelotes deltshevi (Dimitrov 1996)

Coelotes sp.: Dimitrov 1993:74, fig. 1.

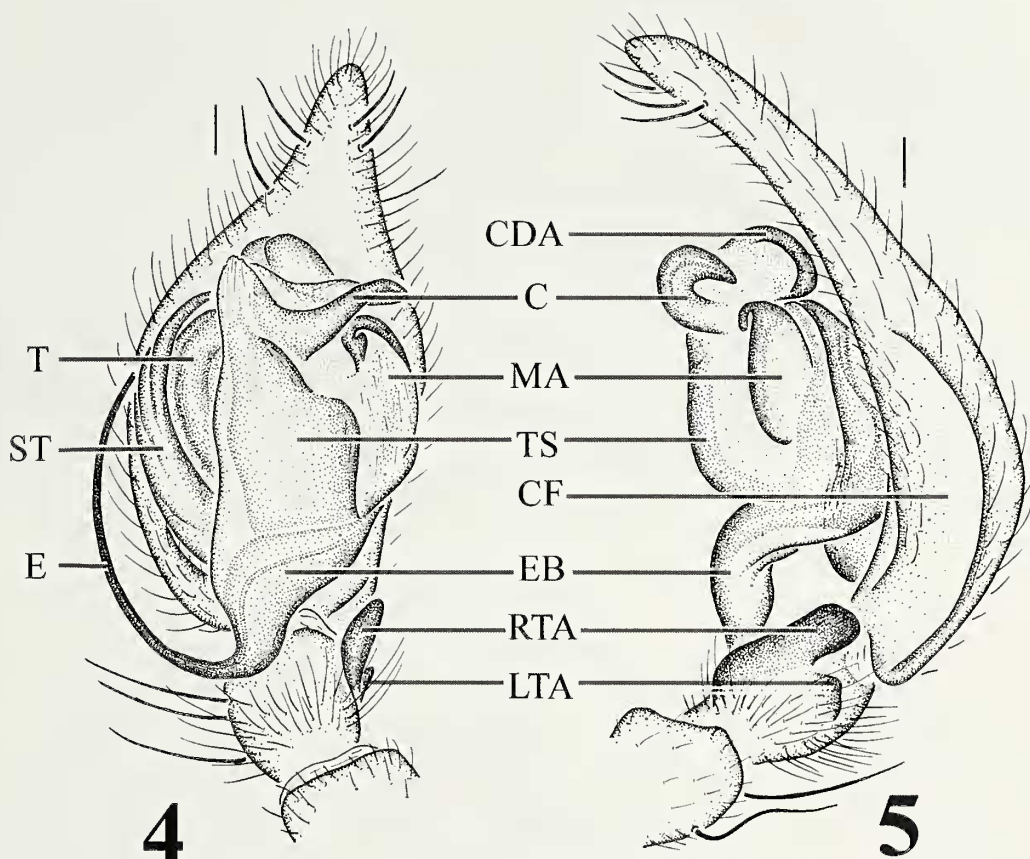
Coelotes deltshevi Dimitrov 1996:159, figs. 1-6 (male and female types from Bulgaria, deposited in IZS and Naturhistorisches Museum, Wien, not examined).

Eurocoelotes deltshevi Wang 2002:76.

Diagnosis.—This species resembles *E. brevispinus* in having large, anteriorly situated copulatory ducts, broad lateral tibial apophysis, a similar conductor, and small median apophysis, but can be distinguished by the broad atrium (wider than long), long epigynal teeth (at least as long as atrial length) in female and the absence of a patellar apophysis in male.

Description.—See Dimitrov (1996).

Female: Epigynal teeth as long as or longer than atrium length, arising from posterolateral atrium, separated by about atrial width; atrium large, anteriorly situated, wider than long, separated from epigastric furrow by at least its length;



Figures 4, 5.—*Eurocoelotes anophus* (Kulczyński), male palp, ventral and retrolateral view.

copulatory ducts originating anteriorly, extending posteriorly, distinctly separated; spermathecae round, slightly extending anteriorly, distinctly separated; spermathecal heads medially originated.

Male: Patellar apophysis absent; RTA more than half of tibial length, slightly extending distally; lateral tibial apophysis broad, bifurcate; cymbial furrow slightly less than half of cymbial length; conductor short, broad, slightly extending anteriorly, with broad dorsal apophysis, small basal lamella; median apophysis small, round, spoon-shaped, retrolateral margin approximately the same size as prolateral margin; embolus short, filiform, prolateral in origin.

Distribution.—Bulgaria.

Eurocoelotes drenskii (Deltshev 1990)

Coelotes drenskii Deltshev, 1990:30, fig. 1 (male type from Bulgaria, in IZS, not examined).

Eurocoelotes drenskii: Wang 2002:76.

Diagnosis.—The male resembles *E. brevispinus* by having a patellar apophysis, a broad lateral tibial apophysis, and a small median apophysis, but can be distinguished by the blunt patellar apophysis and the abruptly curved conductor.

Description.—See Deltshev (1990).

Male: Patellar apophysis short, with blunt distal end; RTA slightly extending distally; lateral tibial apophysis broad; cymbial furrow about 1/3 of cymbial length; conductor broad, slightly extending anteriorly, abruptly curved distally, with broad dorsal apophysis, small basal lamella; median apophysis small, round, spoon-shaped, retrolateral margin approximate-

ly same size as prolateral margin; embolus short, filiform, prolateral in origin.

Female: Unknown.

Distribution.—Bulgaria.

Eurocoelotes falciger (Kulczyński 1897)

(Figs. 11–15, 58)

Coelotes falciger Kulczyński 1897 (in Chyzer & Kulczyński 1897):161, fig. 12 (types not examined).

Anaurobius falciger: Kulczyński 1906:467, figs. 8, 41.

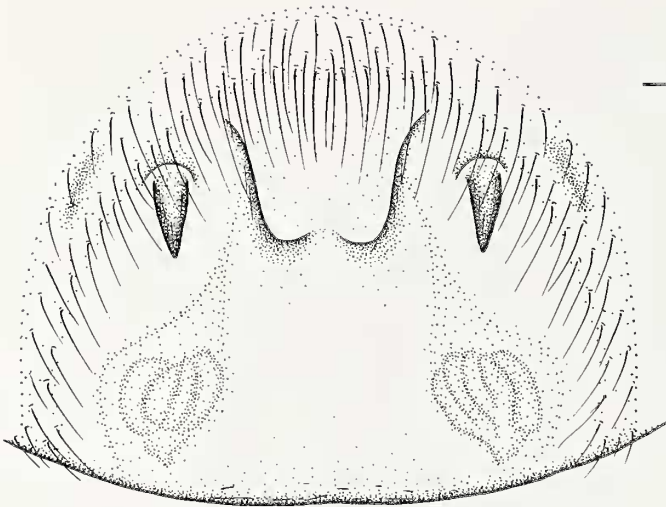
Coelotes intermedius Rosca 1935:250, figs. 9, 10 (first synonymized by Weiss and Andrei, 1989). Rosca 1937:205, fig. 11.

Coelotes falciger: Drensky 1942:43, figs. 5i, 6b; Brignoli 1977a:948, figs. 9–12; Weiss & Andrei 1989:338; Deltshev 1990:31, figs. 2.1–2.3.

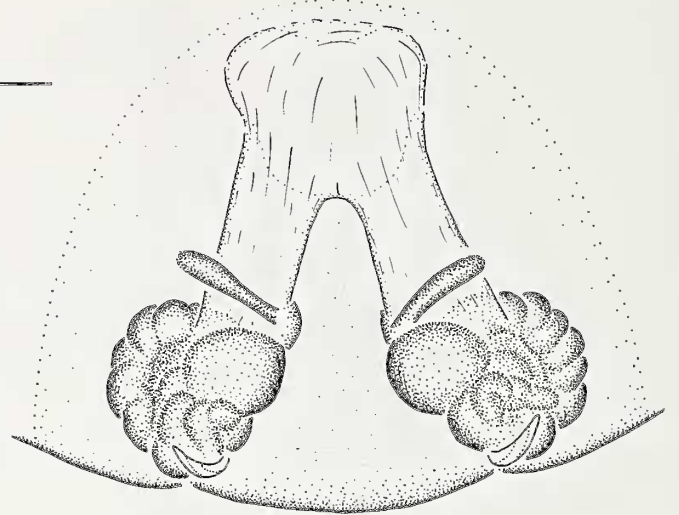
Eurocoelotes falciger: Wang 2002:76.

Material examined.—BULGARIA: Varna, November 4, 1971, 1♂1♀ (Valle & Moretti, MCB); Black Sea, Albena, October 30, 1994, 2♂1♀ (V. Popov, Coll. Deltchev). GREECE: Cyrecie, Loannine, 1200–1500 m, passo ketere vers E., October 19, 1974, 2♀ (Vigue, MCV); Epiro, Katara (Loannina), 1600 m, September 30, 1966, 1♂ (P. Brignoli, MCV); Epiro, Malakasi (Trikkala), 1200 m, September 28, 1966, 1♀ (P. Brignoli, MCV). EUROPE: Label not readable, 4♀ (ZMB).

Diagnosis.—The male can be easily recognized from other *Eurocoelotes* by the cymbial furrow that extends more than 2/3 of cymbial length, the slender, long conductor, and the embolus that originates retrolaterally, extending posteriorly



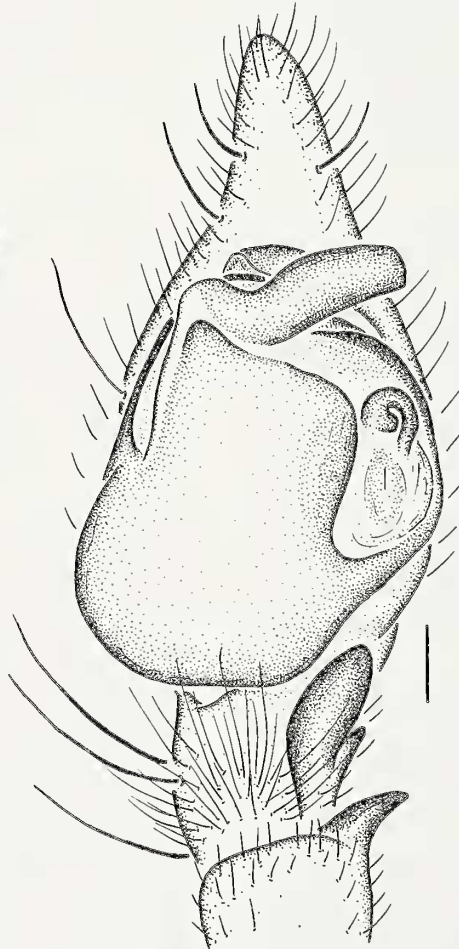
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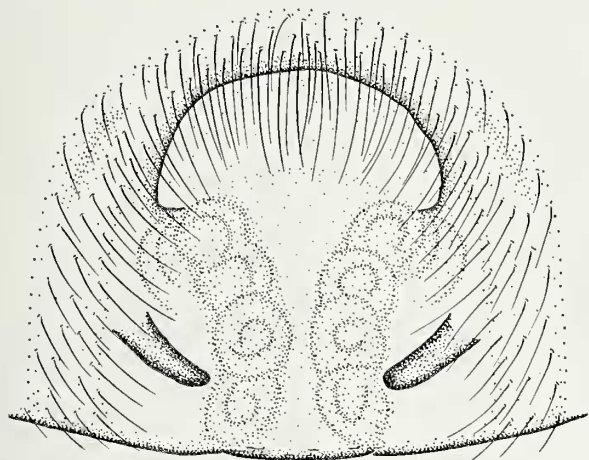


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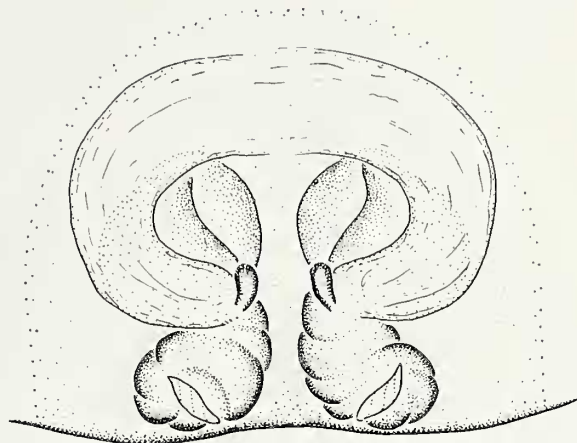


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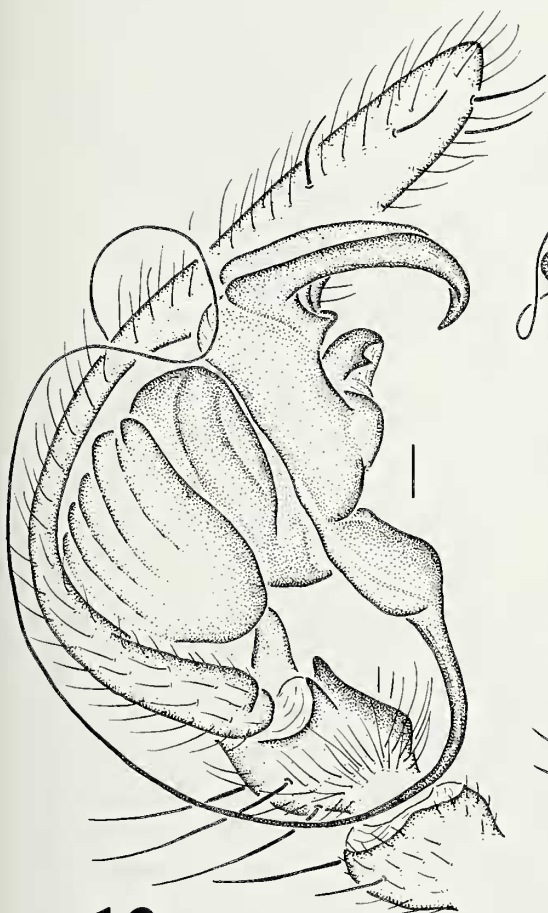
Figures 6–10.—*Eurocoelotes brevispinus* (Deltshv & Dimitrov). 6, 7. Female epigynum, ventral and dorsal view. 8–10. Male palp, prolateral, ventral and retrolateral view.



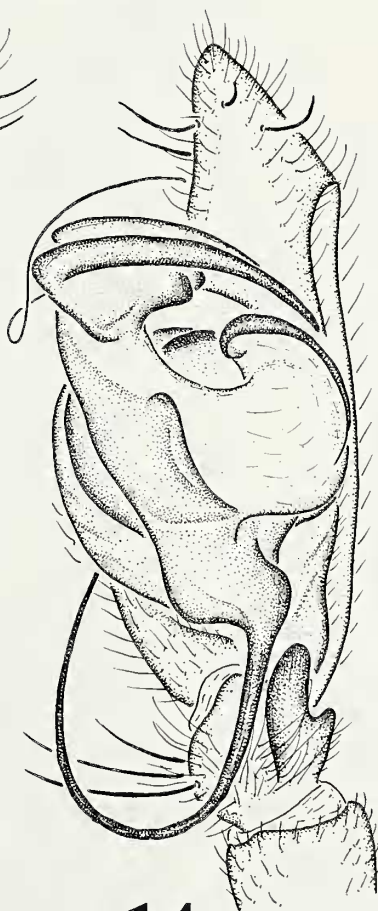
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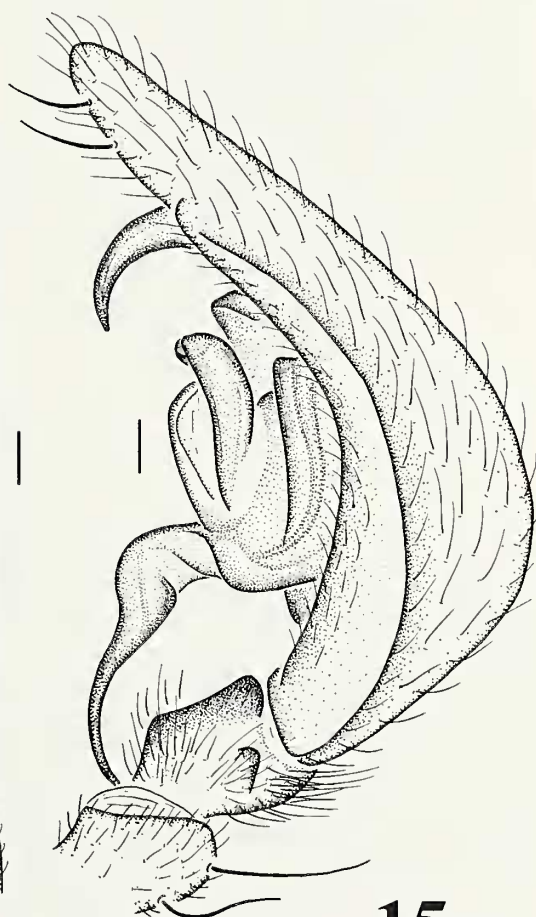
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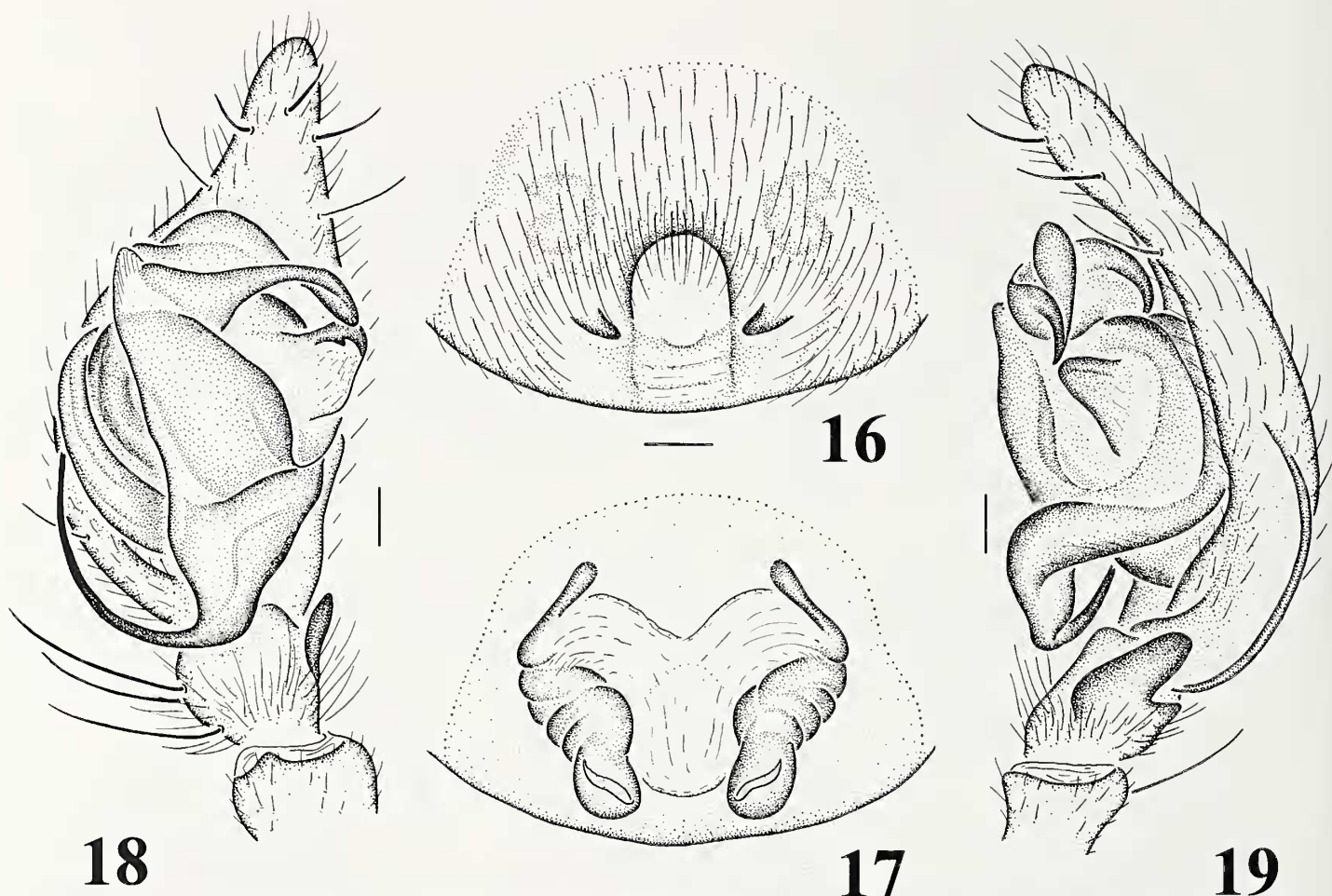
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Figures 11–15.—*Eurocoelotes falciger* (Kulczyński). 11, 12. Female epigynum, ventral and dorsal view. 13–15. Male palp, prolateral, ventral and retrolateral view.

to proximal part of tibia and anteriorly coiled beyond distal part of bulb. The female can be easily recognized by the broad atrium (wider than long), the posteriorly arising epigynal teeth (between atrium and epigastric furrow), and the copulatory ducts that anteriorly originate, extending and connecting to spermathecae laterally (Figs. 11–15).

Description.—See Chyzer & Kulczyński (1897, 1906) and Deltshv (1990).

Female: Epigynal teeth short, arising between atrium and epigastric furrow, separated by approximately atrial width; atrium anteriorly originated, large, wider than long, separated from epigastric furrow by approximately 1.5 times its length;



Figures 16–19.—*Eurocoelotes gasperinii* (Simon). 16, 17. Female epigynum, ventral and dorsal view. 18, 19. Male palp, ventral and retrolateral view.

copulatory ducts large, originating anteriorly, extending laterally, converging and connecting to spermathecae laterally; spermathecae broad, round, slightly extending and converging anteriorly; seprmathecal heads small, arising distally (Figs. 11–12).

Male: Patellar apophysis absent; RTA slightly extending distally; lateral tibial apophysis small; cymbial furrow more than $2/3$ of cymbial length; conductor long, slender, with a short dorsal apophysis, a small basal lamella; median apophysis broad, spoon-shaped, retrolateral margin at least twice the length of prolateral margin; embolus long, filiform, retrolateral in origin, extending posteriorly beyond tarsus/tibia junction to proximal part of tibia, anteriorly coiled beyond distal part of bulb (Figs. 13–15).

Distribution.—Bulgaria, Greece, Hungary, Romania, former Yugoslavia.

Eurocoelotes gasperinii (Simon 1891)
(Figs. 16–22, 58)

Coelotes gasperinii Simon 1891 (in Gasperini 1891):41 (male lectotype and female paralectotype from Dalmatia, Croatia, in MNHN, examined). Simon 1893:254, fig. 255.

Amaurobius gasperinii: Kulczyński 1906:462, figs. 7, 43, 62.

Coelotes gasperinii: de Blauwe 1973:35, figs. 30–33.

Eurocoelotes gasperinii: Wang 2002:76.

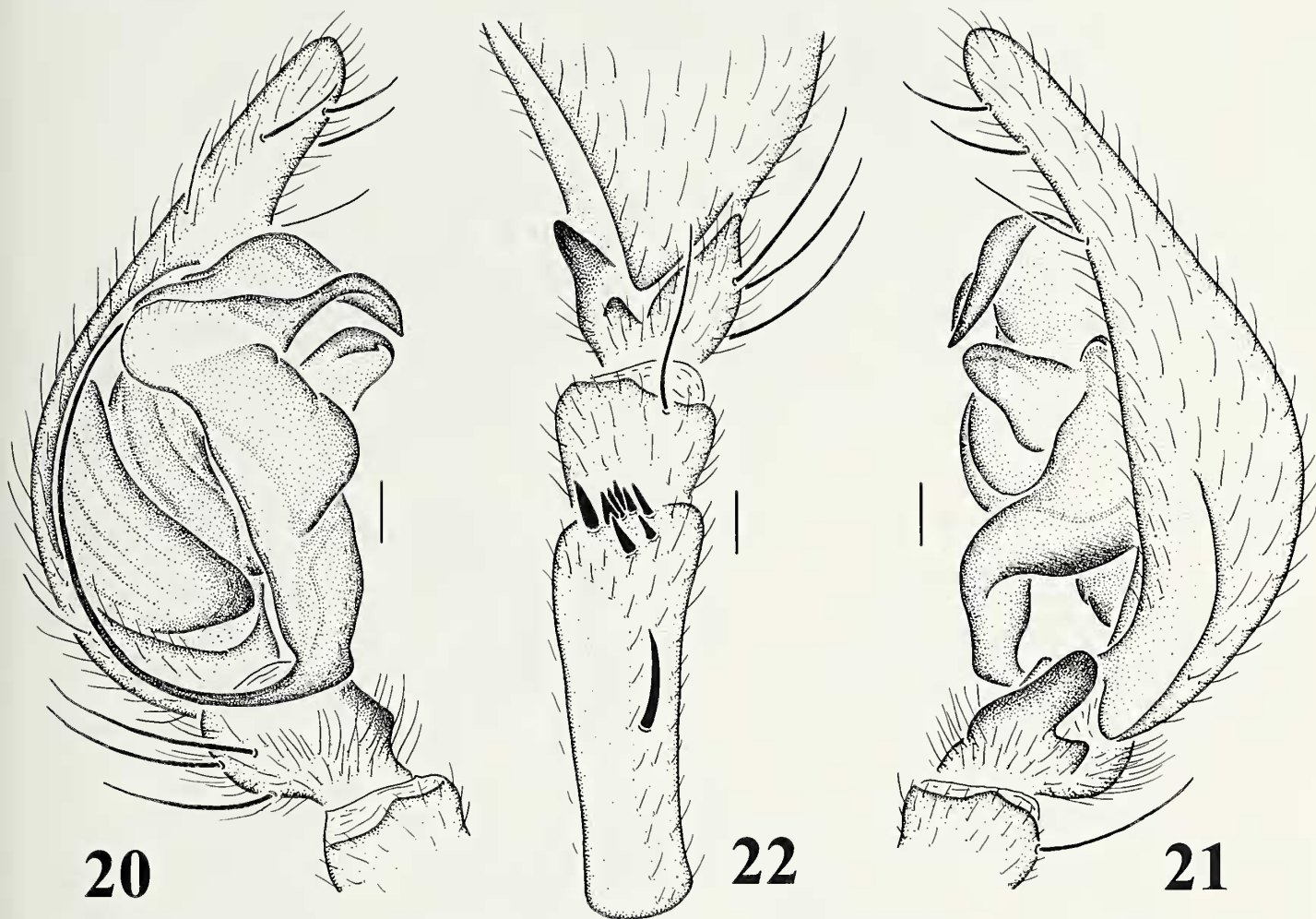
Material examined.—*Lectotype*: CROATIA: Dalmatia, δ lectotype and ♀ paralectotype (E. Simon, MNHN, Bocal 2.011, tube n 6341).

Other material examined: CROATIA: P. so Vagani, August 13, 1970, 1 δ (MCB); Dalmatia, Otok Šipan, Dubrava, June 22, 1974, 1 ♀ (D. Ljubić, COLL. UBICK).

Diagnosis.—The female resembles *E. inermis* by having medially extending copulatory ducts and the anteriorly diverging spermathecae, but can be distinguished by atrium situated at level posterior to epigynal hoods and separated from epigastric furrow by its length (in *E. inermis*, atrium situated at level of epigastric hoods and separated from epigastric furrow by at least 1.5 times its length) and copulatory ducts that extend between spermathecae (in *E. inermis* the copulatory ducts extend slightly anterior to spermathecae). Male resembles *E. anoplus* but can be distinguished by presence of approximately eight short macrosetae distally on palpal femur (Figs. 16–22).

Description.—See Simon (1891 in Gasperini 1891), Kulczyński (1906), de Blauwe (1973).

Female: Epigynal teeth short, situated slightly posteriorly of atrium, separated by slightly more than atrial width; atrium medially situated at level posterior to epigynal hoods, with subequal length and width, separated from epigastric furrow by approximately its length; copulatory ducts large, medially



Figures 20–22.—*Eurocoelotes gasperinii* (Simon). 20, 21. Male palp, prolateral and retrolateral view. 22. Male palp, dorsal view.

originating, extending medially between spermathecae; spermathecae with bases separated by their width, stalks extending anteriorly and diverging; spermathecal heads arising distally, extending slightly and converging anteriorly (Figs. 16, 17).

Male: Femur with approximately eight short macrosetae on dorsal side of distal femur and another long seta on dorsal side of middle femur; patellar apophysis absent; RTA distinctly extending distally; lateral tibial apophysis small; cymbial furrow slightly less than half of cymbial length; conductor short, apex slightly curved, with broad dorsal apophysis, small basal lamella; median apophysis broad, spoon-shaped, retrolateral margin at least twice the length of prolateral margin; embolus long, filiform, proximal in origin, extending posteriorly beyond tarsus/tibia junction to distal part of tibia, anteriorly not coiled beyond distal part of bulb (Figs. 18–22).

Distribution.—Croatia.

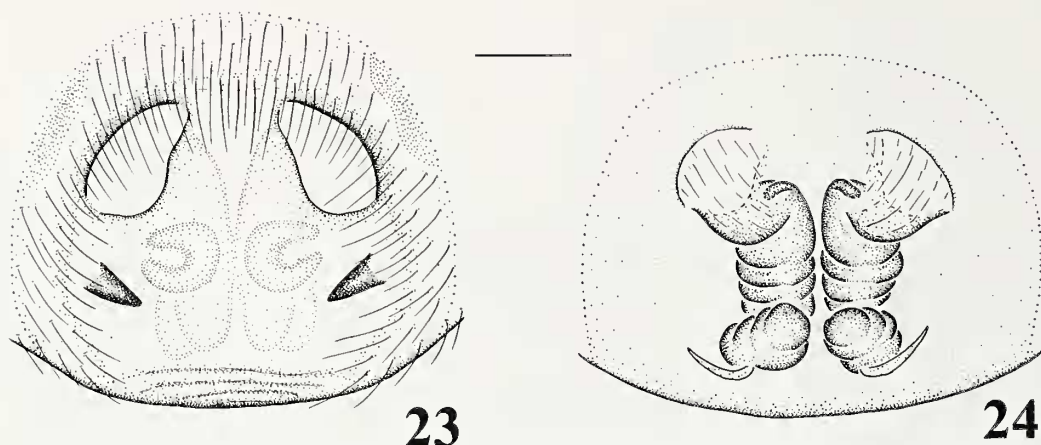
Eurocoelotes halanensis new species
(Figs. 23, 24, 58)

Material examined.—*Holotype:* CROATIA: ♀, Halan, Mali, July 2, 1970 (Valle, MCB).

Etymology.—The specific name refers to its type locality.

Diagnosis.—The female of this species can be easily recognized by the distinctly separated atrial openings and copulatory ducts, the posteriorly arising epigynal teeth, and the contiguous spermathecae (Figs. 23, 24).

Description.—*Female* (holotype): Large-sized coelotine. Total length 10.9. Carapace 5.50 long, 4.20 wide. Abdomen 5.38 long, 3.40 wide. AME and PME subequal in size, ALE largest, PLE slightly smaller than ALE (AME 0.18, ALE 0.25, PME 0.17, PLE 0.20) (Fig. 58); anterior eyes equally separated by approximately $\frac{2}{3}$ of AME diameter, PME separated from each other by slightly more than their diameter, widely separated from PLE by twice PME diameter (AME–AME 0.12, AME–ALE 0.12, PME–PME 0.25, PME–PLE 0.34, AME–PME 0.20). Promargin of chelicera with three teeth, retromargin three. Epigynal teeth short, arising posteriorly between atrium and epigastric furrow, separated by about atrial width; atria anteriorly situated, with two distinct copulatory openings, separated from epigastric furrow by about 1.5 times its length; copulatory ducts relatively small, anteriorly originating, slightly extending posteriorly, distinctly separated; spermathecae closely set, with bases small, round, stalks extending anteriorly; spermathecal heads small, arising distally (Figs. 23, 24).



Figures 23, 24.—*Eurocoelotes halanensis* new species, female epigynum, ventral and dorsal view.

Male: Unknown.

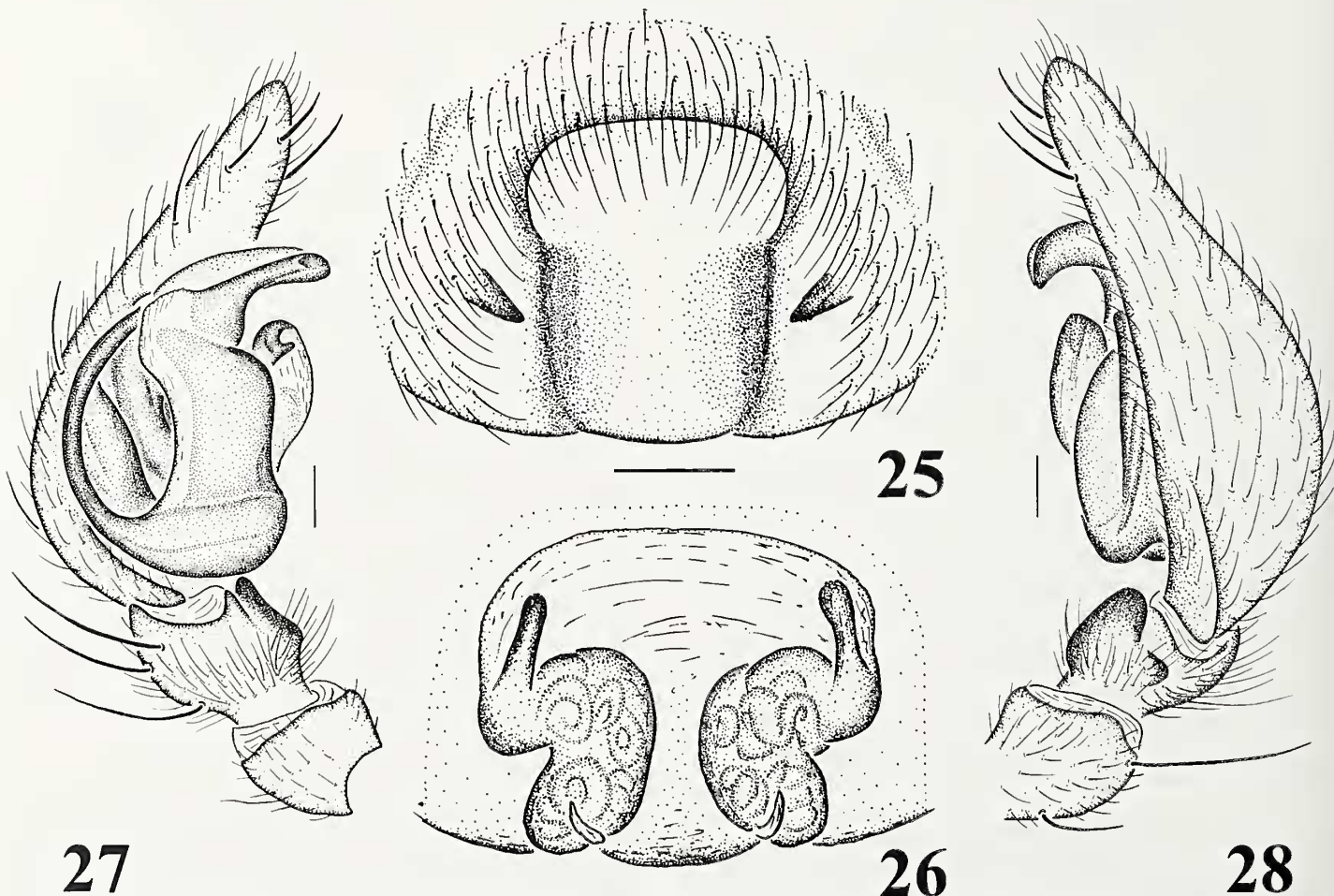
Distribution.—Croatia.

Eurocoelotes inermis (L. Koch 1855)
(Figs. 25–32, 58)

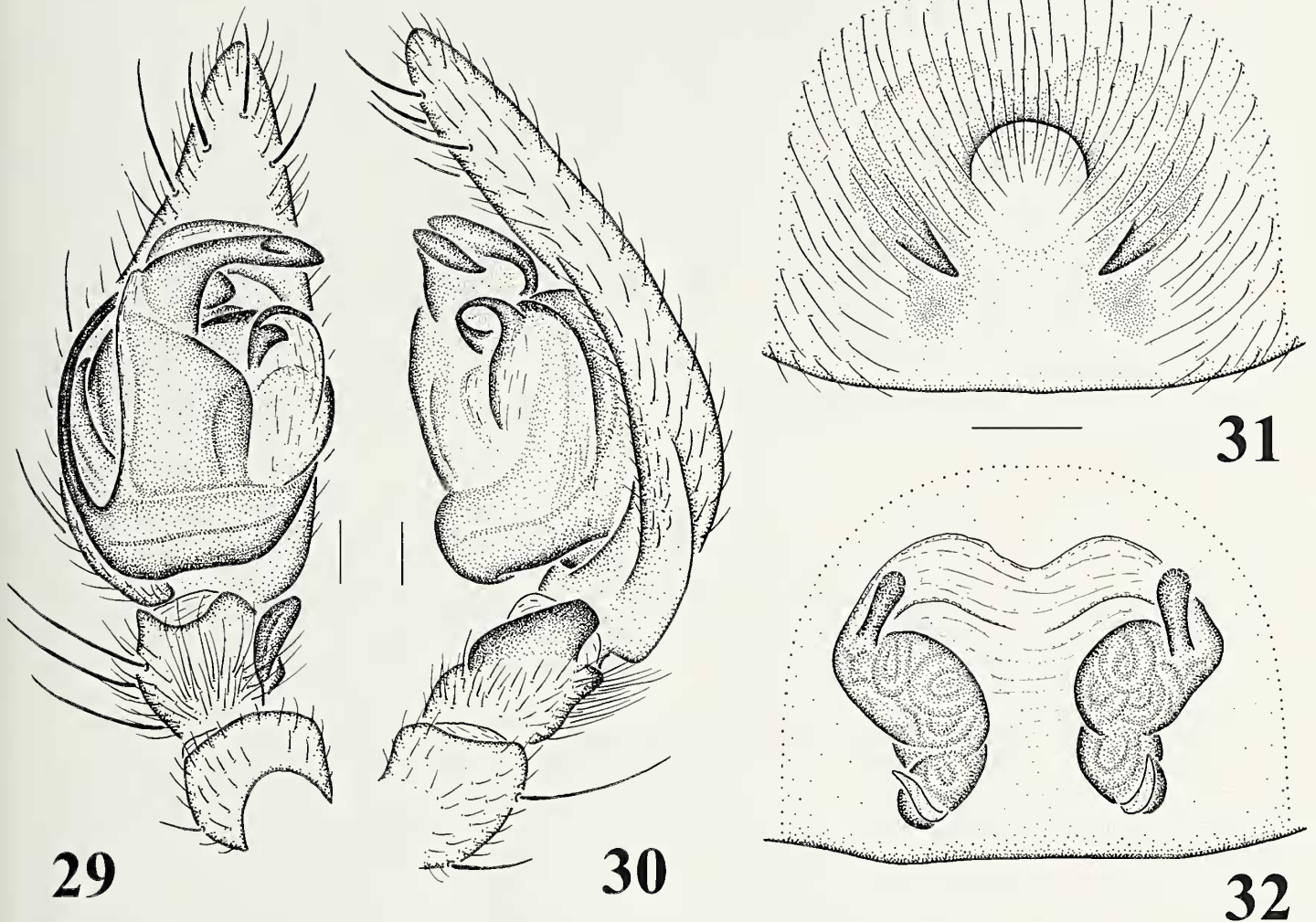
Amaurobius inermis L. Koch 1855:161, fig. 1 (female neotype from Krakow, Poland, in SMNH, examined).

Coelotes inermis: L. Koch 1868:33, figs. 15, 16; Kulczyński 1887:341, fig. 57; Becker 1896:189, fig. 1; Chyzer and Kulczyński 1897:157, fig. 16; Bösenberg 1902:222, fig. 315; Kulczyński 1906:464, figs. 2, 59; Dahl 1931:26, figs. 42, 43; Simon 1937:983, 987, 1037, figs. 1508, 1516; Drensky 1942:42, figs. 5k, 6a; Loksa 1969:106, figs. 73D, 75B.

Amaurobius inermis: Miller 1971:175, figs. 13–15.



Figures 25–28.—*Eurocoelotes inermis* (Koch) from Fra Gospić e Karlobag, Croatia. 25, 26. Female epigynum, ventral and dorsal view. 27, 28. Male palp, ventral and retrolateral view.



Figures 29–32.—*Eurocoelotes inermis* (Koch). 29, 30 (from Fra Gospić e Karlobag, Croatia). Male palp, prolateral and retrolateral view. 31, 32 (from Europe, no detailed location). Female epigynum, showing variation, ventral and dorsal view.

Coelotes inermis: de Blauwe 1973:39, figs. 34–36; Deltshv 1990:33, fig. 3; Heimer and Nentwig 1991:356, fig. 925; Roberts 1995:250; Buchar et al. 1995:120, fig. 35; Bellmann, 1997:136; Roberts 1998:267; Ovtchinnikov 1999:74, figs. 32, 33.

Eurocoelotes inermis: Wang 2002:76, figs. 211–226; Trotta 2005:161, fig. 202.

Material examined.—*Neotype*: POLAND: Krakow, 1♀ (SMNH, Coll. Thorell, 227/1383a).

Other material examined: POLAND: Roztocze Nat. Pk., Bukowa Gora, June 20, 1987, 3♀ (B. & H. Malkin, AMNH); Pachow, Pow. Wadowice. Woj. Krakowskie, September 8, 1974, 1♀ (B. Malkin & M. Mlynarski, AMNH). ITALY: Friuli-Venezia Giulia, Arta Terme, 440 m, September 7, 1963, 1♀ (Bianchi Valle, MCB); Friuli-Venezia Giulia, Paluzza, 600 m, September 9, 1963 (Bianchi Valle, MCB); Bolzano, Planca di Sotto, August 25, 1972, 1♀ (Rallo, MCV); Bressanone, Tonte Plose, 1200 m, June 18, 1972, 1♀ (Oppi, MCV); Basel, 1♂1♀ no detailed label (AMNH). FRANCE: no detailed label, 2♀ (MCZ). SWITZERLAND: Umgebung Basel, Franmatt VII, 6♂17♀ (Keine Angaben, NHMB); Alpes, 1♂1♀ (SMNH, Coll. Thorell, 227/1383b); Basel, 1♂1♀ (Schen-

kel, AMNH); Predigerholz, SW of Neumunchenstein, 340 m, September 2, 1973, under bark of oak log, 1♀ (B. Malkin & H. & I. Hurlimann, AMNH); Solothurn, Oensingen-Schloss, June 13, 1980, 1♀ (B. & H. Malkin, AMNH); Ruttunen, May 1–2, 1980, 2♂ (B. Malkin, AMNH); Ruttunen, May 1976, 1♀ (B. Malkin, AMNH); Oberdorf, August 1973, 1♀ (B. Malkin, AMNH). BULGARIA: C. Balkan, C. Tuzha, 1500 m, August 10, 1996, 2♂ (C. Deltshv, Coll. Deltshv). BOSNIA: Passo di Kupras, August 11, 1970, 1♂ (MCB); August 11, 1970, 1♂ (Mc Brigamo, MCV). SLOVENIA: Kranj forest, 1960, 3♂3♀ (A. Polenec, MCZ). CROATIA: Fra Gospić e Karlobag, August 17, 1969, 1♂3♀ (Bianchi Valle, MCB); Zagreb, Medvednica, Horvatovih 500 Stuba, 650 m beech litter, September 2–10, 1994, 1♂1♀ (D. Ljubić, COLL. UBICK). GERMANY: Nurnberg, 1♂1♀ (type specimens were collected from this locality) (SMNH, Coll. Thorell, 227/1383c); Between Deutz and Siegen, August 9, 1964, 1♀ (USNM); 1♂ (HEC, B.438, t.100); Neiderwall a Rhein, 1♀ (CAS); Hessen, June 28–29, 1958, 2♀ (H. & L. Levi, MCZ); Saxony, Tharandt, ca 13 air km SW of Dresden, Fichtenwald (=spruce forest), 3♂1♀ (ZMB); Saxony, Osterzgebirge (=East Erz Mountains), Seyde, ca 32 air km SSW of Dresden, Vienweide (=pasture), November 21, 1967, 1♀ female (ZMB, Kat. -Nr. 28823). AUSTRIA: Graz,

September, 1875, 1♂ (H. Emerton, MCZ). EUROPE (no detailed label): 2♂ (AMNH-CU, Lot.581, Sub.499). 1♂2♀ (Marx Collection, USNM, No. No. 242); 1♂, 2♀, 1♀, 1♂, 3♀, 2♀, 1♂1♀, 1♀ (ZMB); 2♀ (ZMB, Dahl 1162); 3 (ZMB, Kat. -Nr. 14016); 1♂1♀ (ZMB, 5169); 8♂ (ZMB, Kat. -Nr. 14094); 1♂1♀ (ZMB, 4698); 2♂4♀ (ZMB, 14473); 4♂ (ZMB, Kat. -Nr. 14013); 1♂1♀ (ZMB, Dahl 2073); 1♂2♀ (ZMB, 4696); 1♂ (ZMB, Dahl 877); 1♂ (ZMB, 14478); 1♀ (ZMB, Dahl 928); 3♂ (ZMB, 14471); 2♂ (ZMB, 14475); 1♀ (ZMB, Dahl, 926); 1♀ (ZMB, 1218); 1♀ (ZMB, Dahl 1636); 1♂ (ZMB, Dahl 2120); 1♀ (ZMB, Dahl 2358); 1♀ (ZMB, Dahl 1343); 1♀ (ZMB, 14480); 6 (ZMB, 14018); 1♂ (ZMB, 14480); 6♂ (ZMB, 14018); 1♂ (ZMB, 14470); 1♀ (ZMB, Dahl 2074); 1♀ (ZMB, Dahl 2119); 2♂ (ZMB, 14476); 2♀ (ZMB, Dahl, 2135); 1♂ (ZMB, 14477); 1♂ (ZMB, 14474); 4♂ (ZMB, 14472).

Diagnosis.—The female resembles *E. gasperinii* by having medially extending copulatory ducts and anteriorly diverging spermathecae but can be distinguished by the atrium, which is separated from epigastric furrow by at least two times its length (in *E. gasperinii*, the atrium is separated from epigastric furrow by its length) and the copulatory ducts that extend slightly anterior to spermathecae (in *E. gasperinii*, the copulatory ducts are limited between spermathecae). The male resembles *E. karlinskii* by having a similar conductor and a prolaterally originating embolus, but can be distinguished by the presence of a prolaterally directed tooth on subdistal conductor and a slightly notched embolic base (Figs. 25–30).

Description.—See L. Koch (1855), Kulczyński (1897 in Chyzer & Kulczyński 1897) and de Blauwe (1973), Deltshv (1990).

Female: Epigynal teeth short, arising between atrium and epigastric furrow, closer to atrium than to epigastric furrow, separated by slightly more than atrial width; atrium small (length and width subequal) or large (wider than long), anteriorly originated, separated from epigastric furrow by approximately 1.5 times its length (specimens with large atrium) or 2–3 times (specimens with small atrium); copulatory ducts large, anteriorly originating, extending medially between spermathecae, extending slightly to anterior spermathecae; spermathecae with bases separated by their width, stalks broad, anteriorly extending and diverging; spermathecal heads long, originating distally (Figs. 25, 26, 31, 32).

Male: Patellar apophysis absent; RTA distinctly extending distally; lateral tibial apophysis small; cymbial furrow approximately 1/3 of cymbial length; conductor short, with subdistal, prolaterally directed tooth, broad dorsal apophysis, and small basal lamella; median apophysis broad, spoon-shaped, retrolateral margin twice the length of prolateral margin; embolus short, filiform, prolateral in origin (Figs. 27–30).

Notes.—Female epigynal atrium may vary in size, although vulva and male palp show consistent structures. Specimens examined from Thorell's collection at SMNH (female neotype from Krakow, Poland) have relatively large atria.

Distribution.—France, Poland, Germany, Switzerland, Italy, Austria, Bosnia, Slavonia, Croatia, Bulgaria.

Eurocoelotes jurinitschi (Drensky 1915)
(Figs. 33–37, 58)

Amaurobius jurinitschi Drensky 1915:155, 175, fig. 1 (types not examined).

Amaurobius j. flavus Drensky 1915:156.

Amaurobius j. niger Drensky 1915:156.

Coelotes jurinitschi Drensky 1942:42, fig. 5f; Deltshv 1990:33, figs. 4.1–4.4.

Eurocoelotes jurinitschi Wang 2002:76.

Material examined.—BULGARIA: Vitosha Mountain, Bistritsa, 1200 m, August 10, 1985, 3♂2♀ (L. Penev, Coll. Deltshv); Pirin mnt, Aramijska polyana, 1400 m, July 14, 1984, 1♀ (Coll. Deltshv).

Diagnosis.—The female resembles *E. deltshevi* in having long epigynal teeth, anteriorly extending copulatory ducts, broad lateral tibial apophysis, and a similar conductor but can be distinguished by the small atrium (length and width subequal), the longer epigynal teeth (almost reaching epigastric furrow), the contiguous copulatory ducts and spermathecae in female, and the broad median apophysis in male (Figs. 33–37).

Description.—See Drensky (1915) and Deltshv (1990).

Female: Epigynal teeth long, arising laterally of atrium, separated by more than atrial width, extending posteriorly and almost reaching epigastric furrow; atrium small, anteriorly situated, length and width subequal, with distinct septum, separated from epigastric furrow by about 1.5 times its length; copulatory ducts originating anteriorly, extending posteriorly; spermathecal bases small, round, separated by about their width, stalks broad, slightly extending and converging anteriorly, contiguous; spermathecal heads slender, long, medially originating, extending laterally (Figs. 33, 34).

Male: Patellar apophysis absent; RTA distinctly extending distally; lateral tibial apophysis broad; cymbial furrow about 1/3 of cymbial length; conductor short, slightly notched distally, with broad dorsal apophysis, small basal lamella; median apophysis spoon-shaped, retrolateral margin at least two times longer than prolateral margin; embolus short, filiform, prolateral in origin (Figs. 35–37).

Distribution.—Bulgaria.

Eurocoelotes karlinskii (Kulczyński 1906)
(Figs. 38–42, 58)

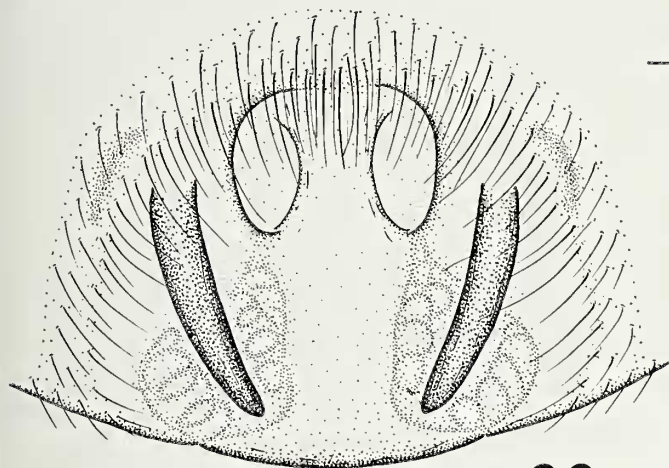
Amaurobius karlinskii Kulczyński 1906:469, fig. 3 (types not examined).

Coelotes karlinskii: Kolosvary 1938:18, figs. g, h; Drensky 1942:42, figs. 5g, 7c, 8; Vasiliu, 1971:101, fig. 1; de Blauwe 1973:47, fig. 43; Deltshv 1990:36, fig. 5.1–5.4

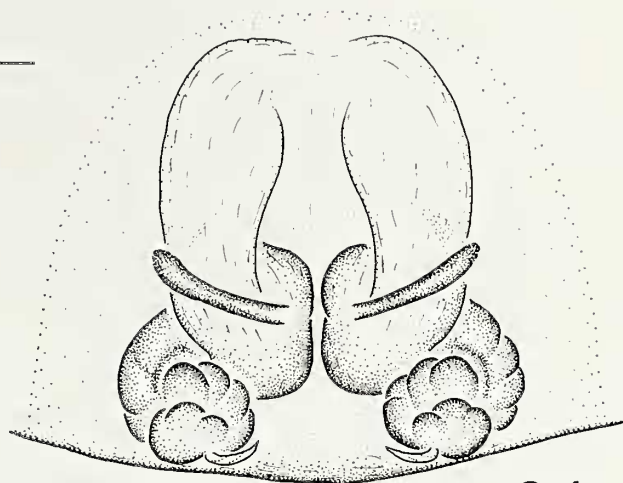
Eurocoelotes karlinskii: Wang 2002:76.

Material examined.—BULGARIA: Vitosha Mountain, Bosnek, 1400 m, September 20, 1984, 3♂1♀ (L. Penev, Coll. Deltshv); detailed location not readable, April 1916, 1♂2♀ (ZMB). MONTENEGRO: Crno Jezero, 1400–1500 m, August 8–10, 1967, 1♂5♀ (B. Malkin, AMNH); 1400–1500 m, August 8–10, 1967, 2♂3♀ (B. Malkin, AMNH); 1400–1500 m, August 8–10, 1967, 5♂5♀ (B. Malkin, AMNH). EUROPE: detailed location not readable, June, 1909, 1♂ (ZMB).

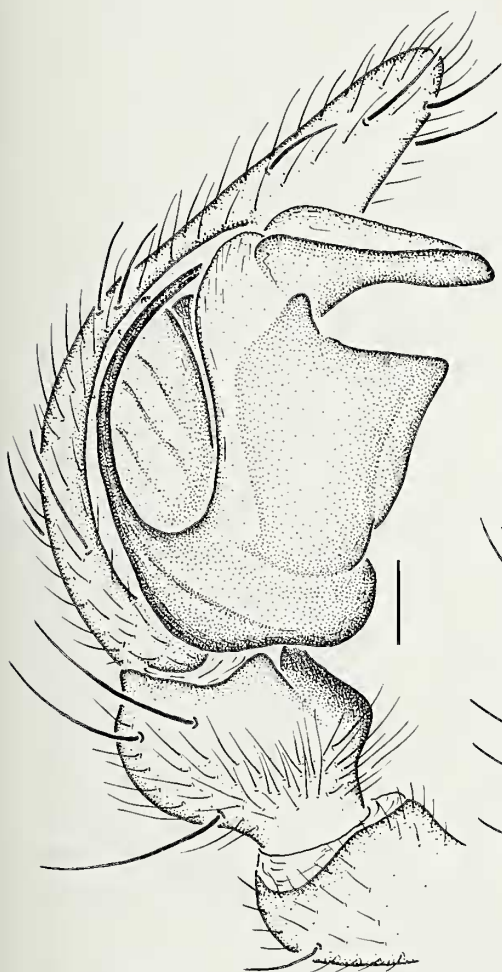
Diagnosis.—This species resembles *E. inermis* by having a similar conductor, prolaterally originating embolus, and medially extending copulatory ducts, but can be distinguished by the absence of a subdistal tooth on conductor, the smooth embolic base in male, and the anteriorly arising epigynal teeth and the anteriorly converging spermathecae in female (Figs. 38–42).



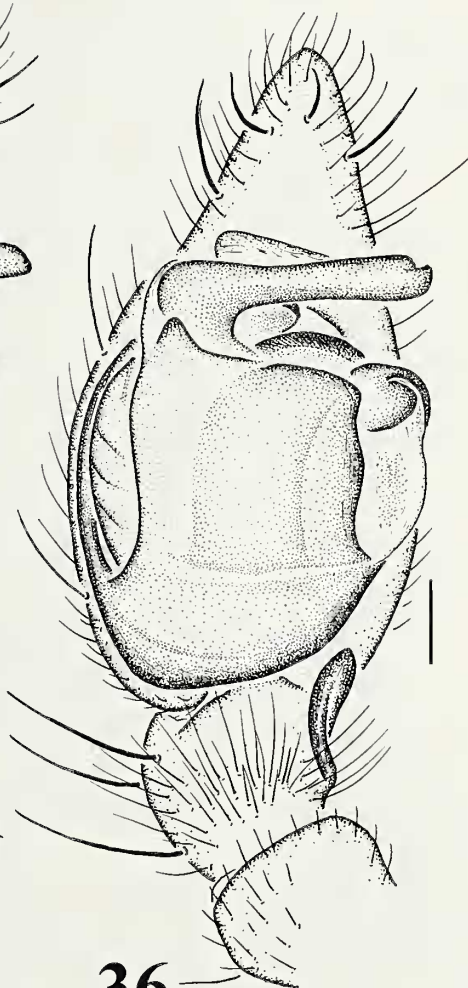
33



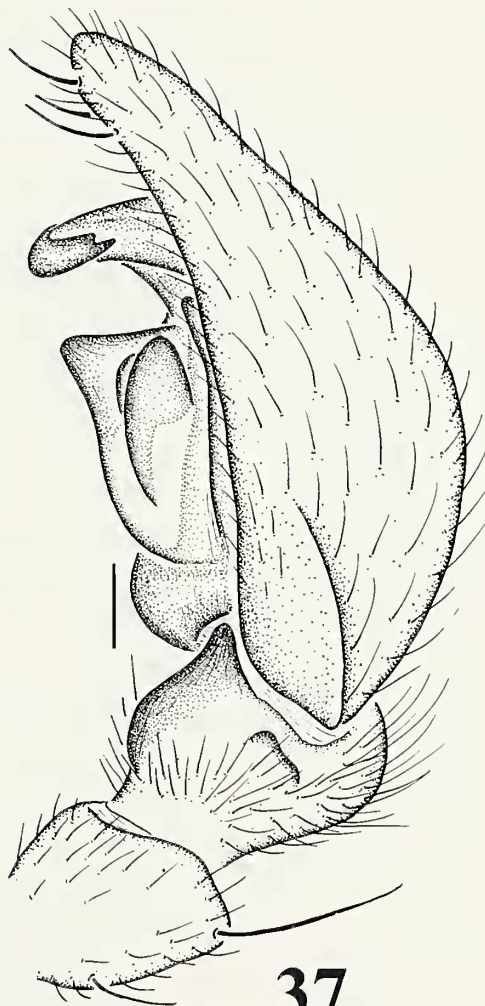
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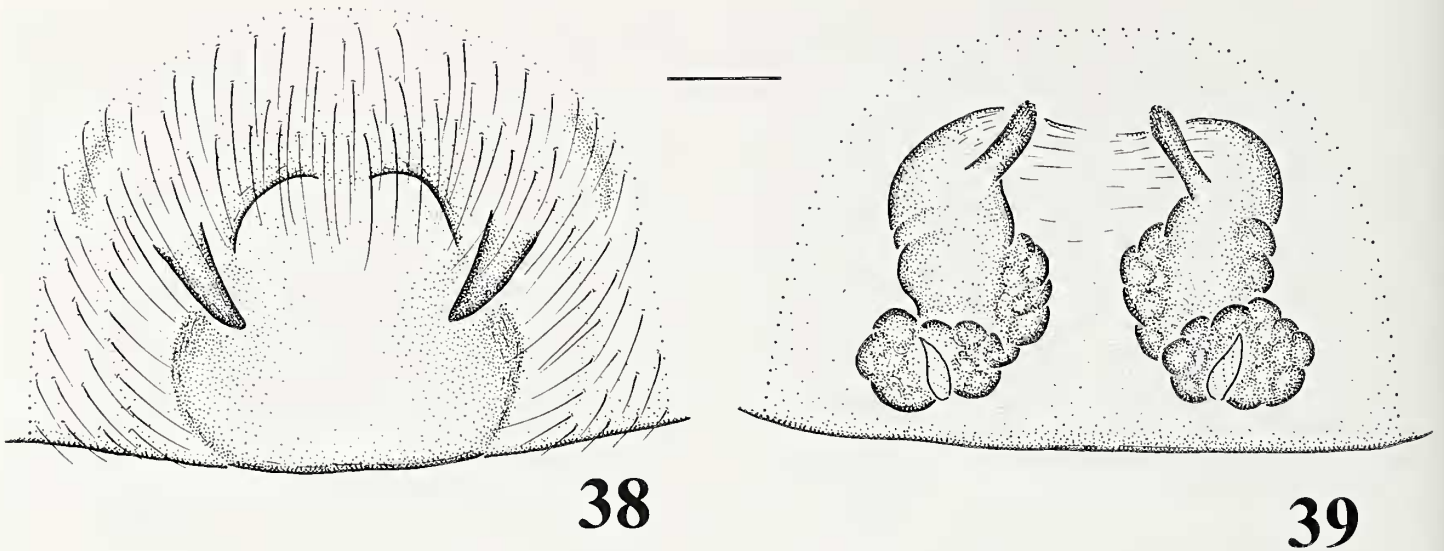
37

Figures 33–37.—*Eurocoelotes jurinitschi* (Drensky). 33, 34. Female epigynum, ventral and dorsal view. 35–37. Male palp, prolateral, ventral and retrolateral view.

Description.—See Kulczyński (1906), de Blauwe (1973), Deltshv (1990).

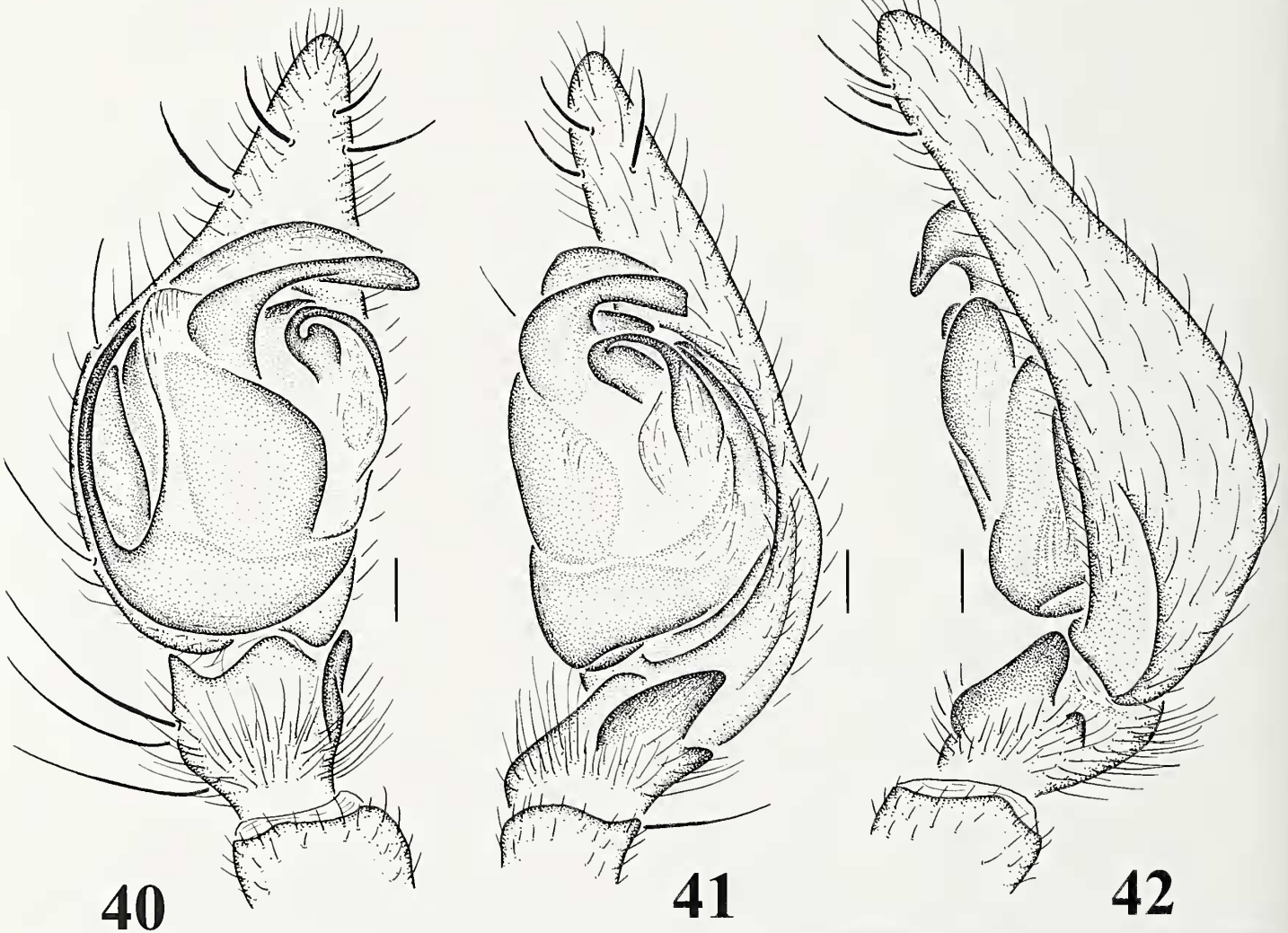
Female: Epigynal teeth short, arising laterally of atrium, separated by slightly more than atrial width; atrium small,

originating anteriorly, separated from epigastric furrow by approximately 1.5–2 times its length; copulatory ducts small, medially originating, extending medially between spermathecae; spermathecae with bases small, round, separated by their



38

39



40

41

42

Figures 38–42.—*Eurocoelotes karlinskii* (Kulczyński). 38, 39. Female epigynum, ventral and dorsal view. 40–42. Male palp, prolateral, ventral and retrolateral view.

width, stalks broad, anteriorly extending, slightly converging and then parallel to each other; spermathecal heads originating distally, extending and slightly converging anteriorly (Figs. 38, 39).

Male: Patellar apophysis absent; RTA distinctly extending distally; lateral tibial apophysis small; cymbial furrow about 1/3 of cymbial length; conductor short, with broad dorsal apophysis, small basal lamella; median apophysis broad,

spoon-shaped, retrolateral margin at least two times longer than prolateral margin; embolus short, filiform, prolateral in origin (Figs. 40–42).

Distribution.—Montenegro, Bulgaria.

Eurocoelotes kulczynski (Drensky 1915)
(Figs. 43–47, 58)

Amaurobius kulczynsky Drensky 1915:154, 175, fig. 2.2 (types not examined).

Amaurobius kulczynskii: Drensky 1939:86.

Ceolotes kulczynskii: Drensky 1942:41, fig. 5e. Deltshv 1990:36, figs. 6.1–6.6 (types examined, male described for the first time).

Eurocoelotes kulczynski: Wang 2002:76.

Material examined.—BULGARIA: Pirin Mountain, Prevala, 2400 m, July 21, 1981, 1♂1♀ (C. Deltshv, Coll. Deltshv); Vitosha Mountain, ca Aleko, 1800 m, September 7, 1985, 3♂2♀ (L. Penev, Coll. Deltshv); Rilski Monastir, Rila Mts. 1100–1300 m, July 17–21, 1972, 2♀ (B. Malkin, AMNH).

Diagnosis.—The female can be easily recognized by the tiny epigynal teeth, the large atrium separated from epigastric furrow by about its length, and the laterally extending copulatory ducts (Figs. 43, 44). The male resembles *E. deltshevi* and *E. brevispinus* in having a broad lateral tibial apophysis and a small median apophysis, but can be distinguished from *E. brevispinus* by the absence of a patellar apophysis, and from *E. deltshevi* by the non-bifurcate lateral tibial apophysis and the presence of a slightly sclerotized ridge on distal patella (Figs. 45–47).

Description.—See Drensky (1915) and Deltshv (1990).

Female: Epigynal teeth tiny, arising slightly posteriorly of atrium, separated by slightly more than atrial width; atrium large, originating anteriorly, length and width subequal, separated from epigastric furrow by approximately its length; copulatory ducts large, originating anteriorly, extending laterally and posteriorly, connecting to spermathecae laterally; spermathecal bases broad, round, slightly separated, stalks broad, contiguous; spermathecal heads arising anteriorly, extending laterally (Figs. 43, 44).

Male: Patellar apophysis absent, with slightly sclerotized ridge; RTA distinctly extending distally; lateral tibial apophysis small; cymbial furrow less than 1/3 of cymbial length; conductor short, broad, slightly curved distally, with broad dorsal apophysis, small basal lamella; median apophysis small, spoon-shaped, retrolateral margin and prolateral margin subequal in length; embolus short, filiform, prolateral in origin (Figs. 45–47).

Distribution.—Bulgaria.

Eurocoelotes microlepidus (de Blauwe 1973)
(Figs. 48–52, 58)

Ceolotes microlepidus de Blauwe 1973:67, fig. 57 (female holotype from Montecchio, Italy, in MCV, examined).

Deltshv 1990:38, figs. 7.1–7.4, 8.1–8.2.

Eurocoelotes microlepidus: Wang 2002:76.

Material examined.—ITALY: Montecchio, May 2, 1968, ♀ holotype (G. Osella, MCV); Trento, Vallata di Ledro, May 15, 1971, 1♀ (G. Osella, MCV). BULGARIA: Zemen Gorge, 500 m, October 29, 1976, 2♂2♀ (G. Blagoev, Coll. Deltshv). EUROPE: label not readable, June, 1908, 1♀ (ZMB).

Diagnosis.—The female resembles *E. gasperinii* by having small epigynal teeth arising slightly posteriorly to atrium, medially originating and extending copulatory ducts, and widely separated spermathecae, but can be distinguished by the slightly wider than long atrium and the parallel extending spermathecae (Figs. 48, 49). The male resembles *E. paramicrolepidus* in having a small patellar apophysis and coiling conductor, but can be distinguished by the relatively broad median apophysis (retrolateral margin longer than prolateral margin) and the shorter conductor (slightly coiled distally, not shaped like a semicircle) (Figs. 50–52).

Description.—See de Blauwe (1973) and Deltshv (1990).

Female: Epigynal teeth short, arising posterolaterally of atrium, separated by atrial width; atrium small, slightly wider than long; copulatory ducts large, anteriorly originating, extending posteriorly between spermathecae; spermathecae slender, long, widely separated by at least three times their width; spermathecal heads small, originating distally (Figs. 48, 49).

Male: Patellar apophysis small; RTA distinctly extending distally; lateral tibial apophysis small; cymbial furrow about 1/3 of cymbial length; conductor broad, slightly coiled distally, with broad dorsal apophysis, small basal lamella; median apophysis broad, spoon-shaped, retrolateral margin extending more than twice the prolateral margin; embolus short, filiform, prolateral in origin (Figs. 50–52).

Distribution.—Italy, Bulgaria, Macedonia.

Eurocoelotes paramicrolepidus new species
(Figs. 53–55, 58)

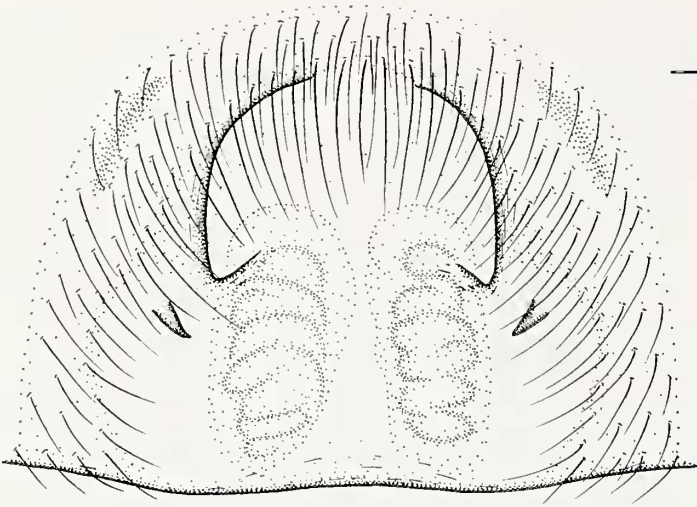
Material examined.—*Holotype*: GREECE: ♂, Peloponnisos, Camp Dimitri Mitropulos, about 10 km W of Vitina, Tripolis-Olimpia, 1000–1100 m, June 15–18, 1981, B. & H. Malkin (AMNH).

Etymology.—The specific name refers to its similarity to *E. microlepidus*.

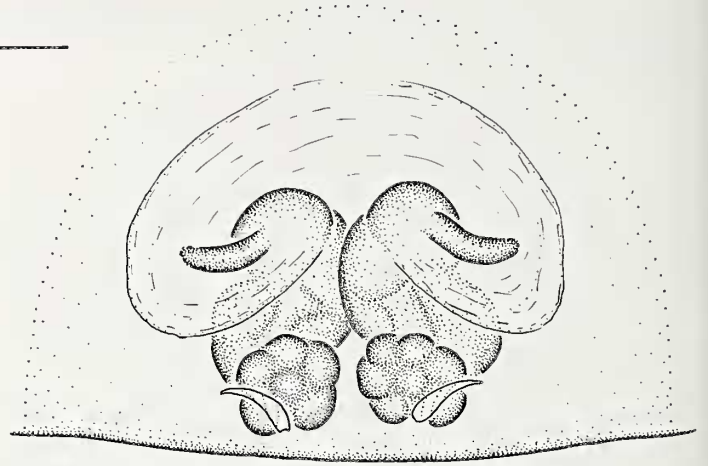
Diagnosis.—The male resembles *E. microlepidus* in having a small patellar apophysis and distally coiled conductor, but can be distinguished by the small median apophysis and a distal conductor that is semicircular in shape (Figs. 53–55).

Description.—*Male (holotype)*: Medium sized coelotine. Total length about 8.50. Carapace 4.40 long, 2.80 wide. Abdomen damaged. AME and PME subequal, ALE largest, PLE slightly smaller than ALE (AME 0.15, ALE 0.20, PME 0.16, PLE 0.18); AME separated from each other by approximately 2/3 of AME diameter, from ALE by approximately 1/3 of AME diameter; PME separated from each other by their diameter; from PLE by slightly less than 1.5 times PME diameter (AME–AME 0.09, AME–ALE 0.05, PME–PME 0.16, PME–PLE 0.22, AME–PME 0.14). Promargin of chelicera with three teeth, retromargin three. Patellar apophysis tiny; RTA distinctly extending distally; lateral tibial apophysis small; cymbial furrow slightly less than half of cymbial length; conductor broad, long, coiled distally to a semicircle shape, with broad dorsal apophysis, small basal lamella; median apophysis small, spoon-shaped, retrolateral margin slightly longer than prolateral margin; embolus short, filiform, originating between prolateral and proximal (Figs. 53–55).

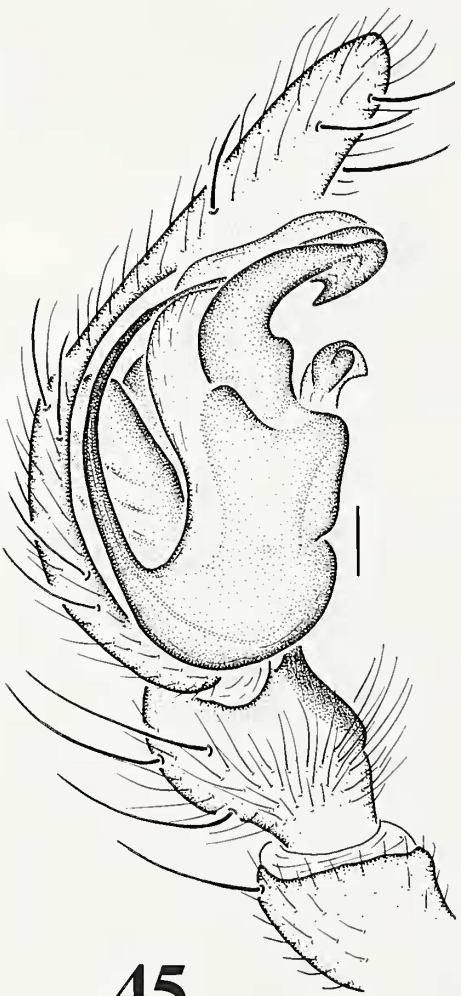
Female: Unknown.



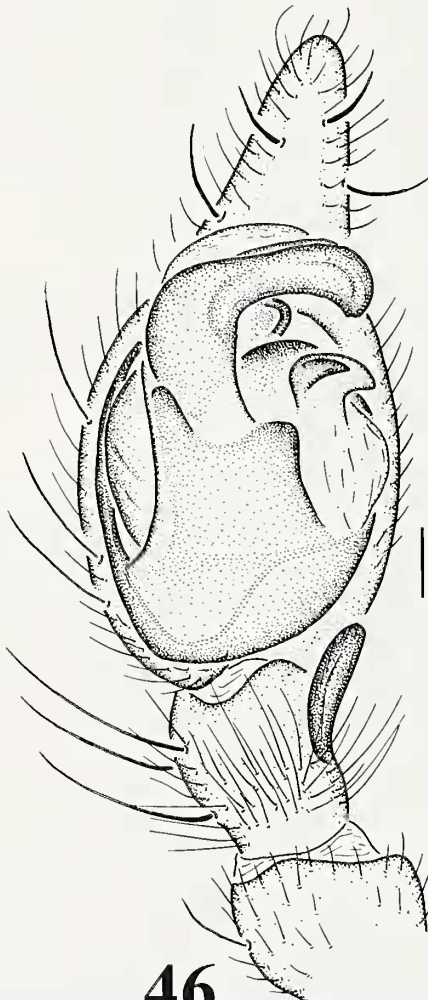
43



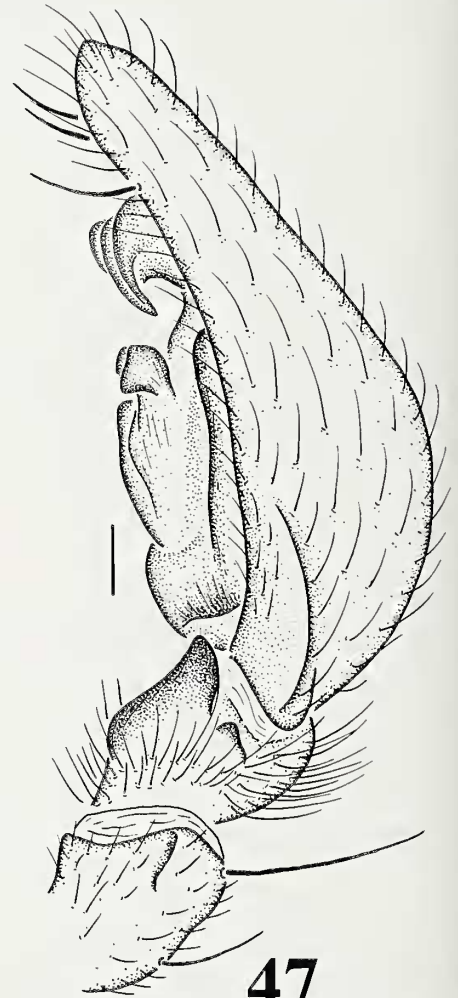
44



45

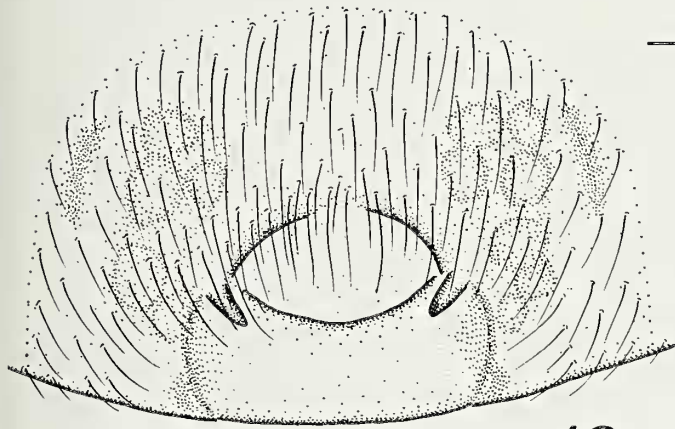


46

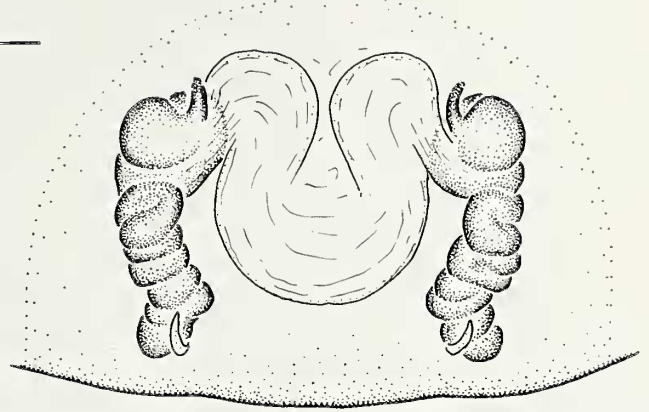


47

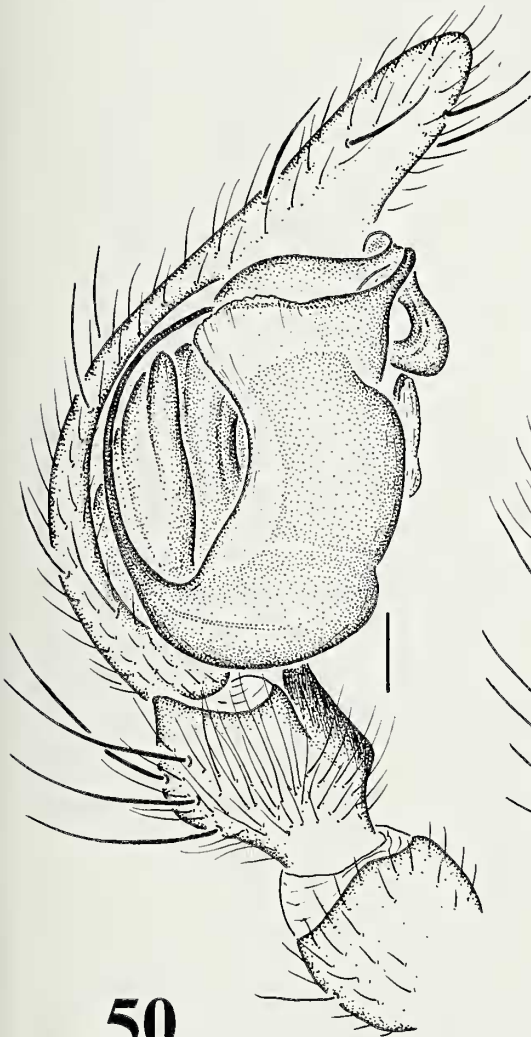
Figures 43-47.—*Eurocoelotes kulczynski* (Drensky). 43, 44. Female epigynum, ventral and dorsal view. 45-47. Male palp, prolateral, ventral and retrolateral view.



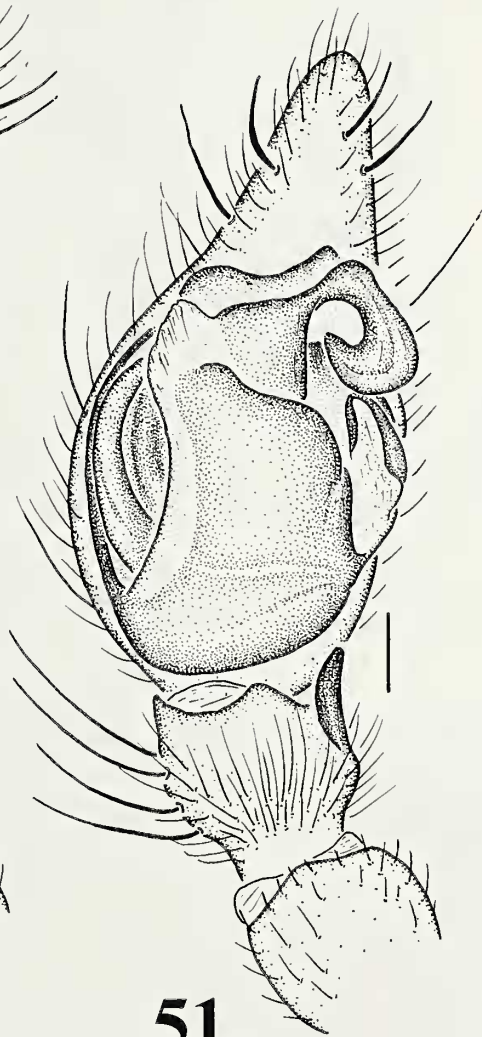
48



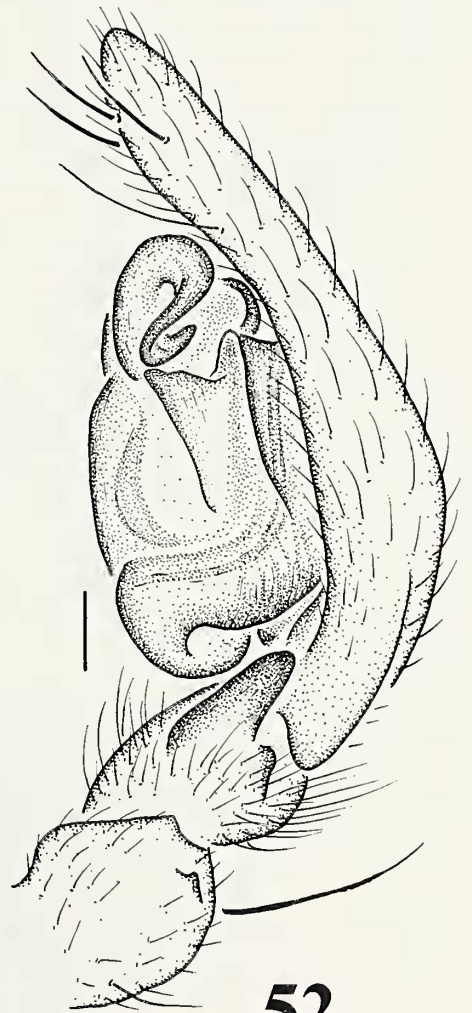
49



50

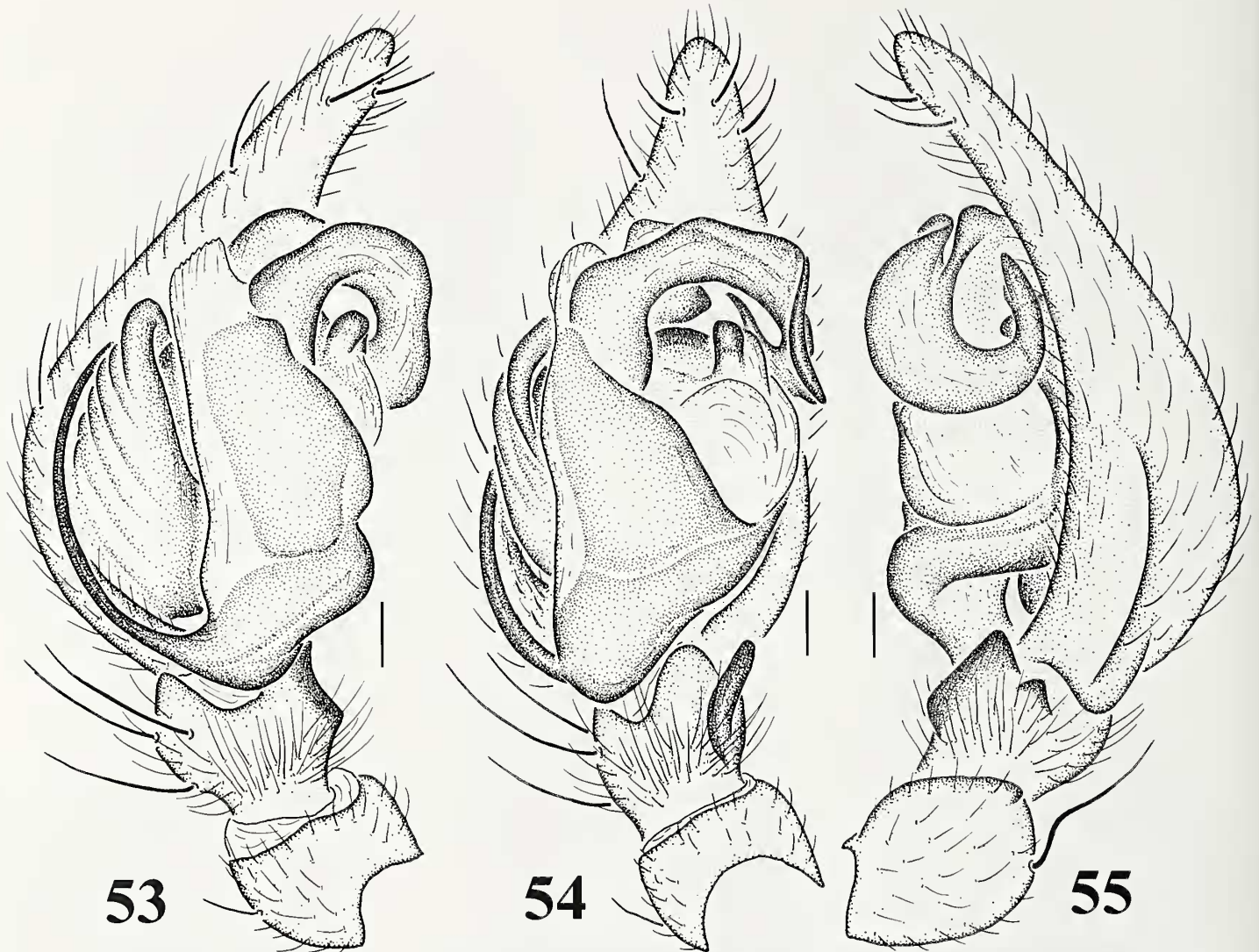


51



52

Figures 48–52.—*Eurocoelotes microlepidus* (de Blauwe). 48, 49. Female epigynum, ventral and dorsal view. 50–52. Male palp, prolateral, ventral and retrolateral view.



Figures 53–55.—*Eurocoelotes paramicrolepidus* new species, male palp, prolateral, ventral and retrolateral view.

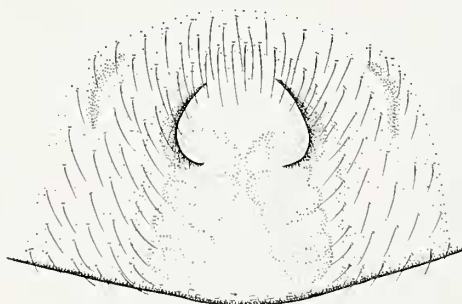
Distribution.—Greece.

Eurocoelotes xinpingsangi Deltshv 2009
(Figs. 56, 57)

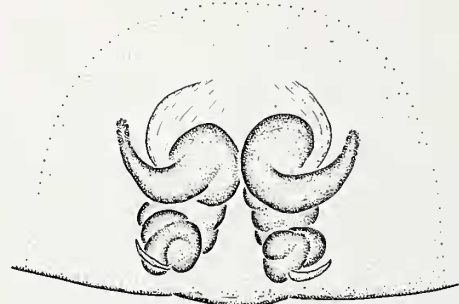
Eurocoelotes xinpingsangi Deltshv 2009:293, figs. 1–2 (male holotype, male and female paratypes from Rila Mountains,

Bulgaria, deposited in IZS, not examined; paratypes from Sitnjakow, Bulgaria, deposited in ZMB, examined).

Material examined.—BULGARIA: Sitnjakowo, 1750 m, May 1916, 1♀ paratype (v. Boebbicher, ZMB, J. N. 478/16, E. N. K.); Sitnjakowo., 1750 m, May 1916, 3♀ paratypes (Boebbicher, ZMB).

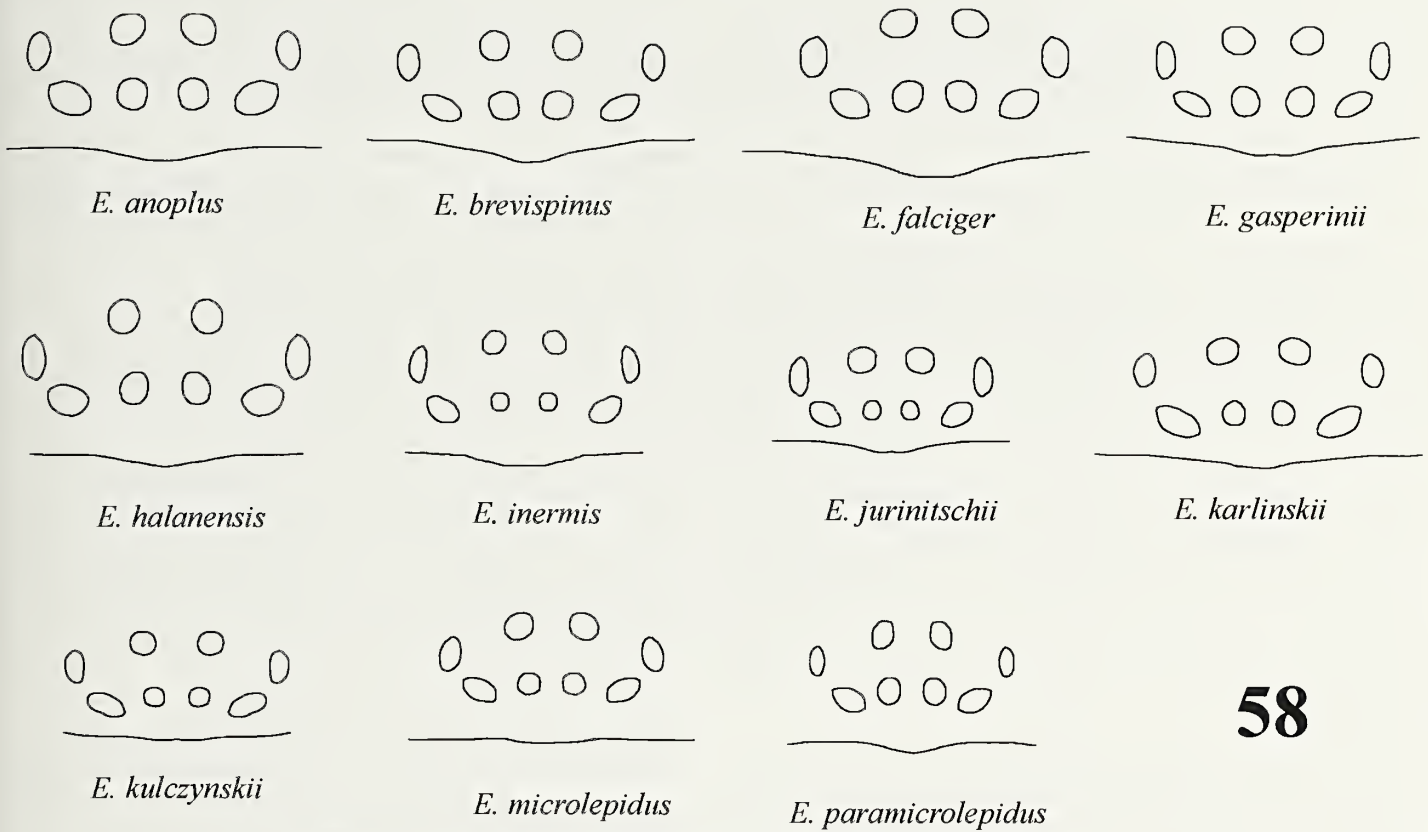


56



57

Figures 56, 57.—*Eurocoelotes xinpingsangi* Deltshv, female epigynum, ventral and dorsal view.



58

Figure 58.—Eyes of eleven *Eurocoelotes* species, view between dorsal and front.

Diagnosis.—The female can be easily recognized by the absence of epigynal teeth (Figs. 56, 57). The male resembles *E. kulczynskii* in having a small median apophysis, but can be distinguished by the slender conductor (Deltshev 2009: Figs. 1a–c).

Description.—See Deltshev (2009).

Female: Without epigynal teeth; atrium with anterior origin, large, length and width subequal, separated from epigastric

furrow by approximately its length or slightly more; copulatory ducts small, originating anteriorly, slightly extending posteriorly; spermathecal bases small, round, separated by about their width, stalks extending and converging anteriorly, contiguous; spermathecal heads long, extending laterally (Figs. 56, 57).

Male: Patellar apophysis absent; RTA distinctly extending distally; lateral tibial apophysis small; cymbial furrow slightly



Figure 59.—Distribution of *Eurocoelotes* species.

less than half of cymbial length; conductor short, slender, with a broad dorsal apophysis, a small basal lamella; median apophysis small, spoon-shaped, retrolateral and prolateral margins subequal in length; embolus short, filiform, prolateral in origin (Deltshev 2009: Figs. 1a–c).

Distribution.—Bulgaria.

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